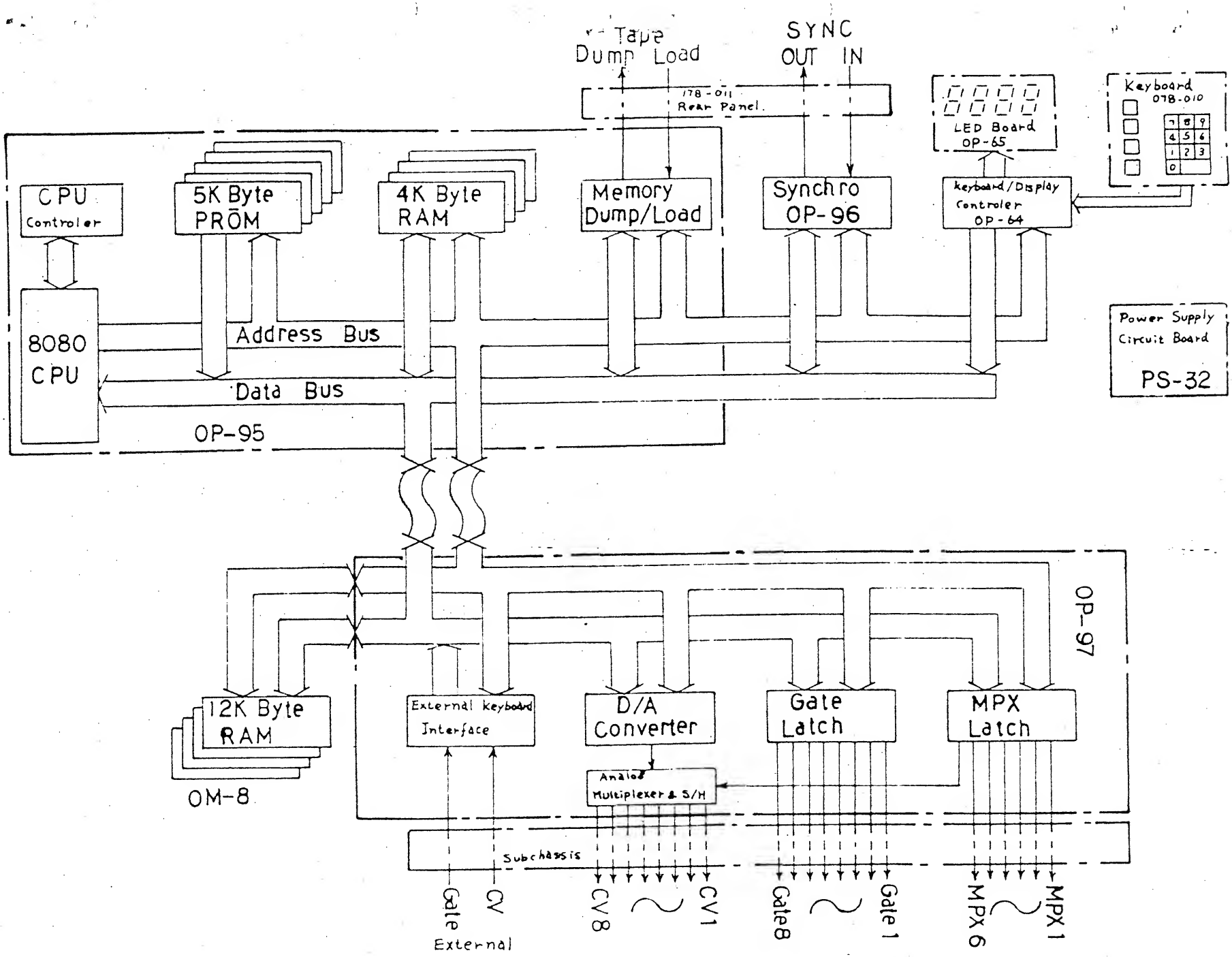
MC-8

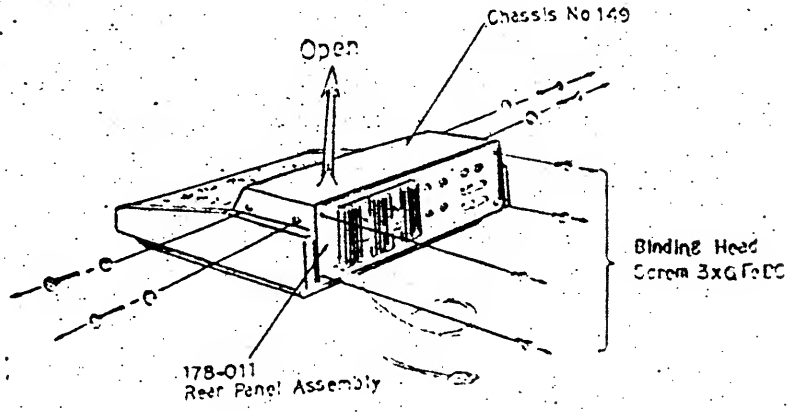
service note

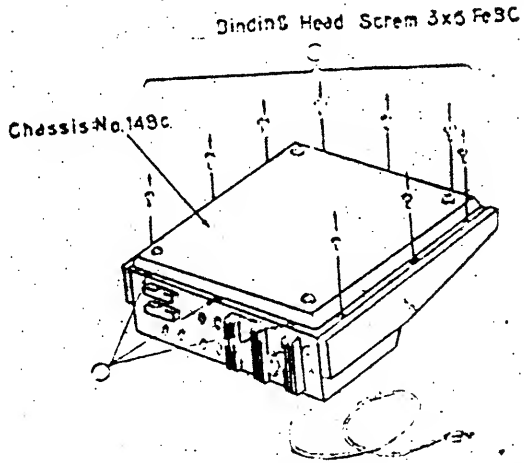
Roland

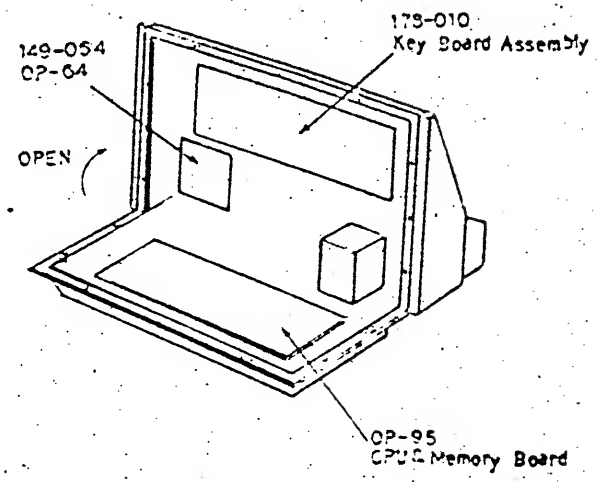


MC-8 Block Diagram

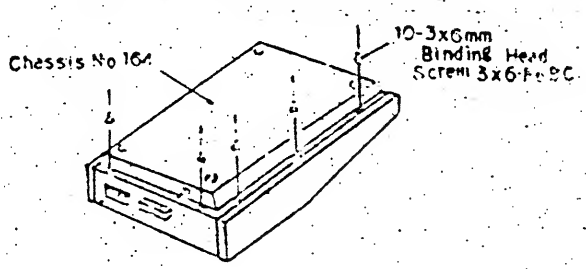
MC-8 Main Disassembly

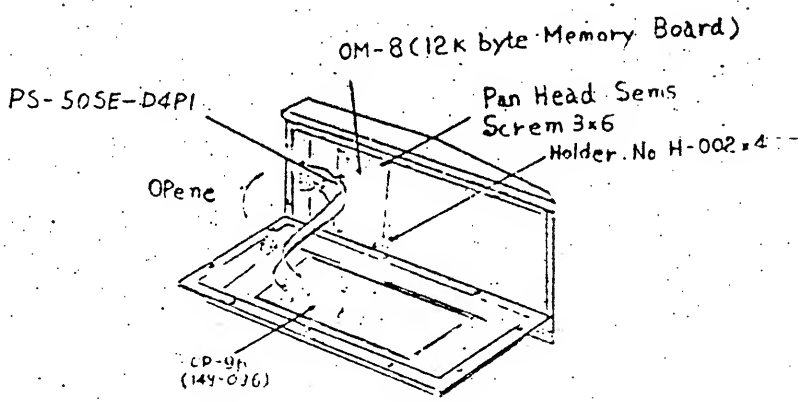


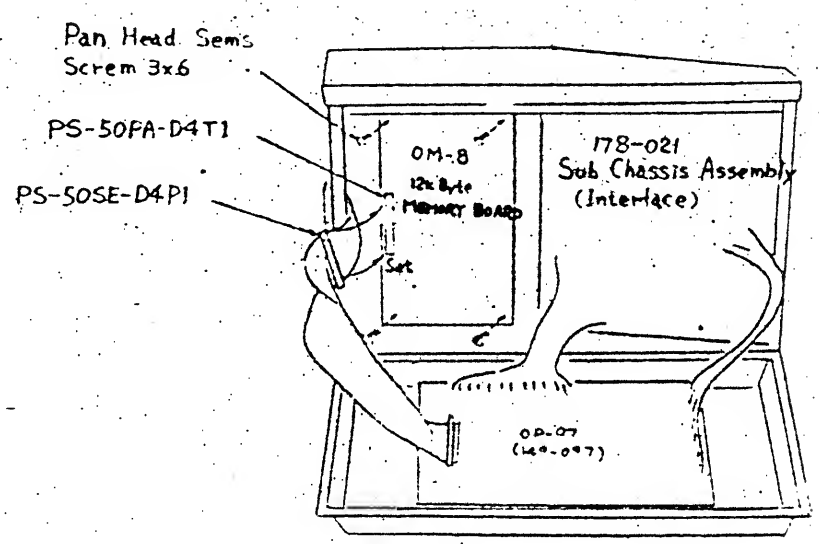




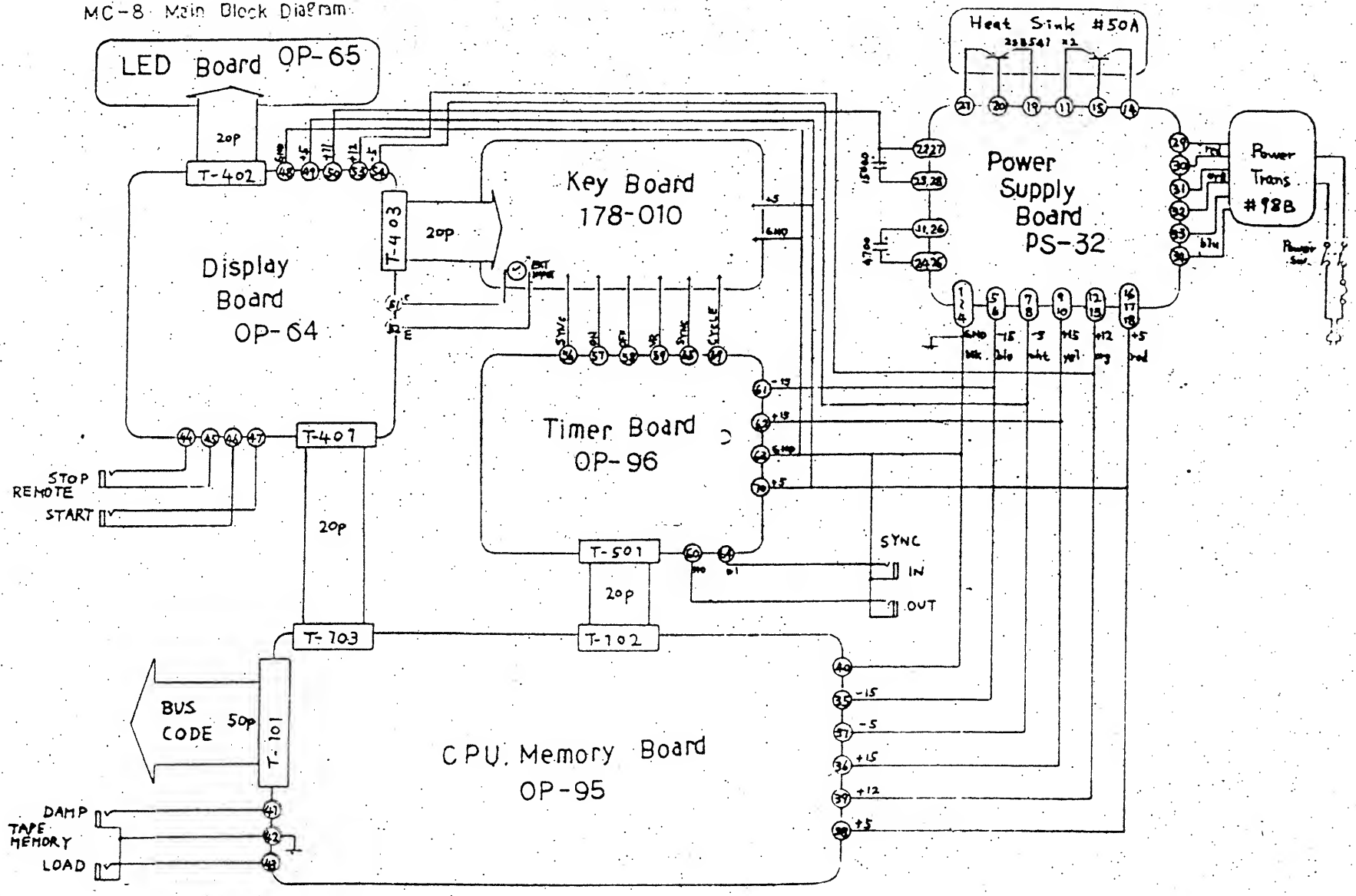
MC-8 Interface Disassembly







MC-8 Main Block Diagram



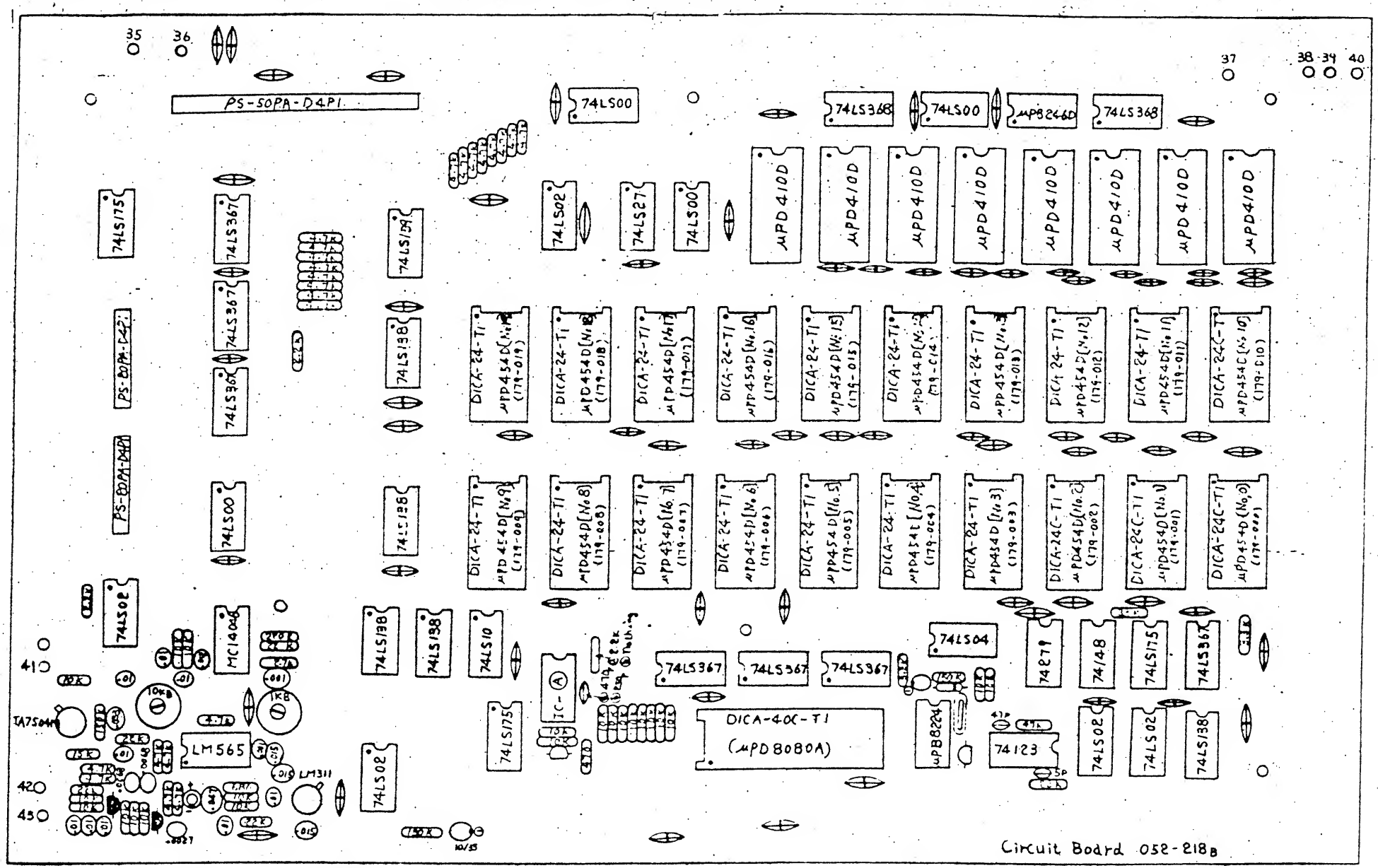
OP-95 Circuit Diagram CPU & Memory Board

	no load	10kΩ load
A_1	1.0 V	0.76 V
A_2	1.35 V	0.91 V

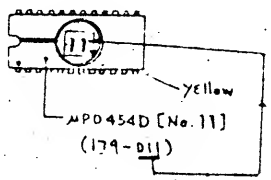
Note
0.1 μF capacitors between certain IC power-supply input pins and ground are not shown.

* Capacitance is calibrated.

Circuit Board Assembly 0[illegible]-95B (149-095B)

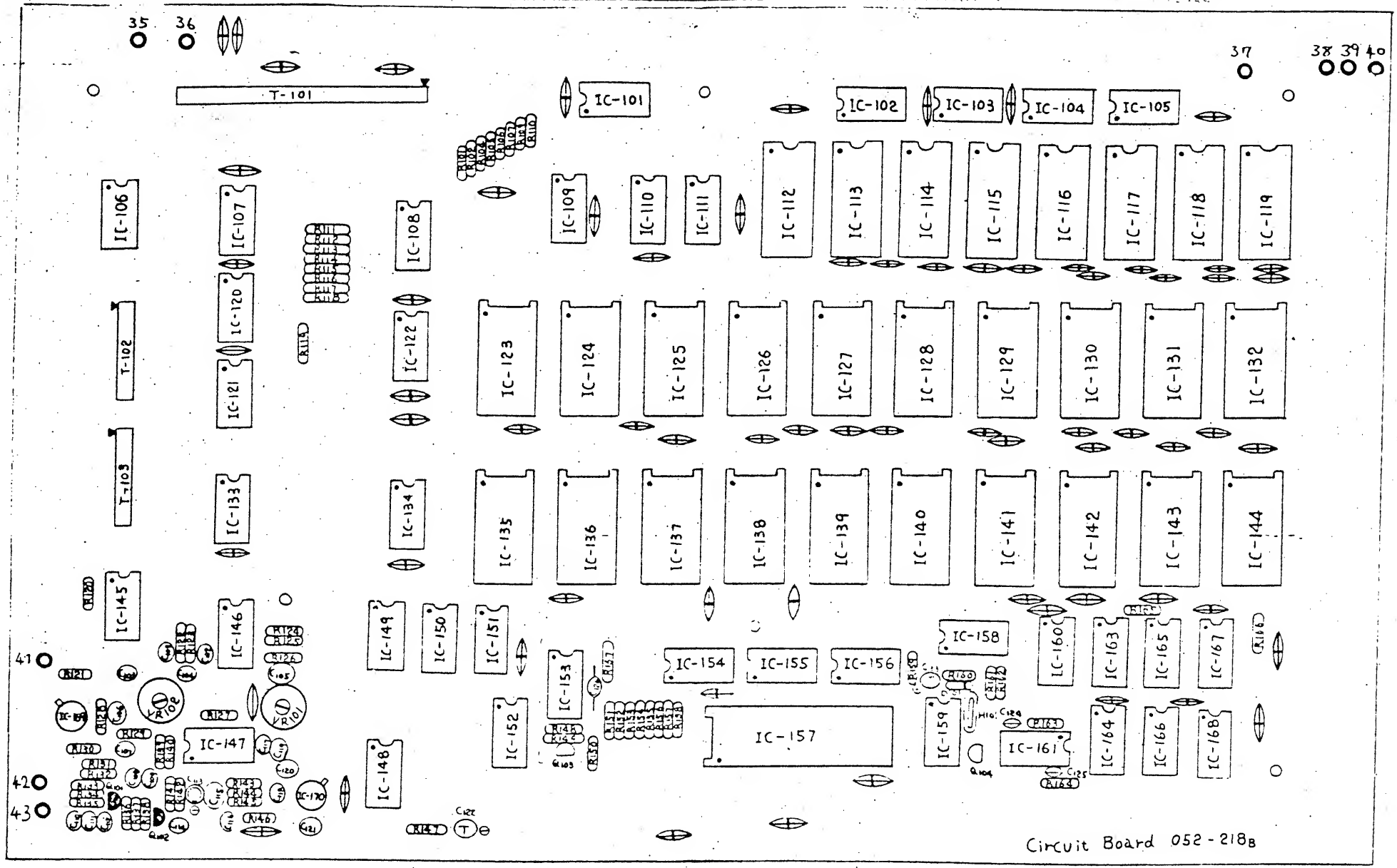


- Resistor, R-25J (±5%)
- Capacitor, Mylar (±10%)
- Capacitor Tantalum (±10%)
- Capacitor Electolytic
- Capacitor Ceramic
- Capacitor Ceramic (0.1μ/25V)
- Transistor 2SC945Q
- Transistor 2SC1923-R
- Diode 1S873
- Crystal Frequency HC-18 (18MHz)



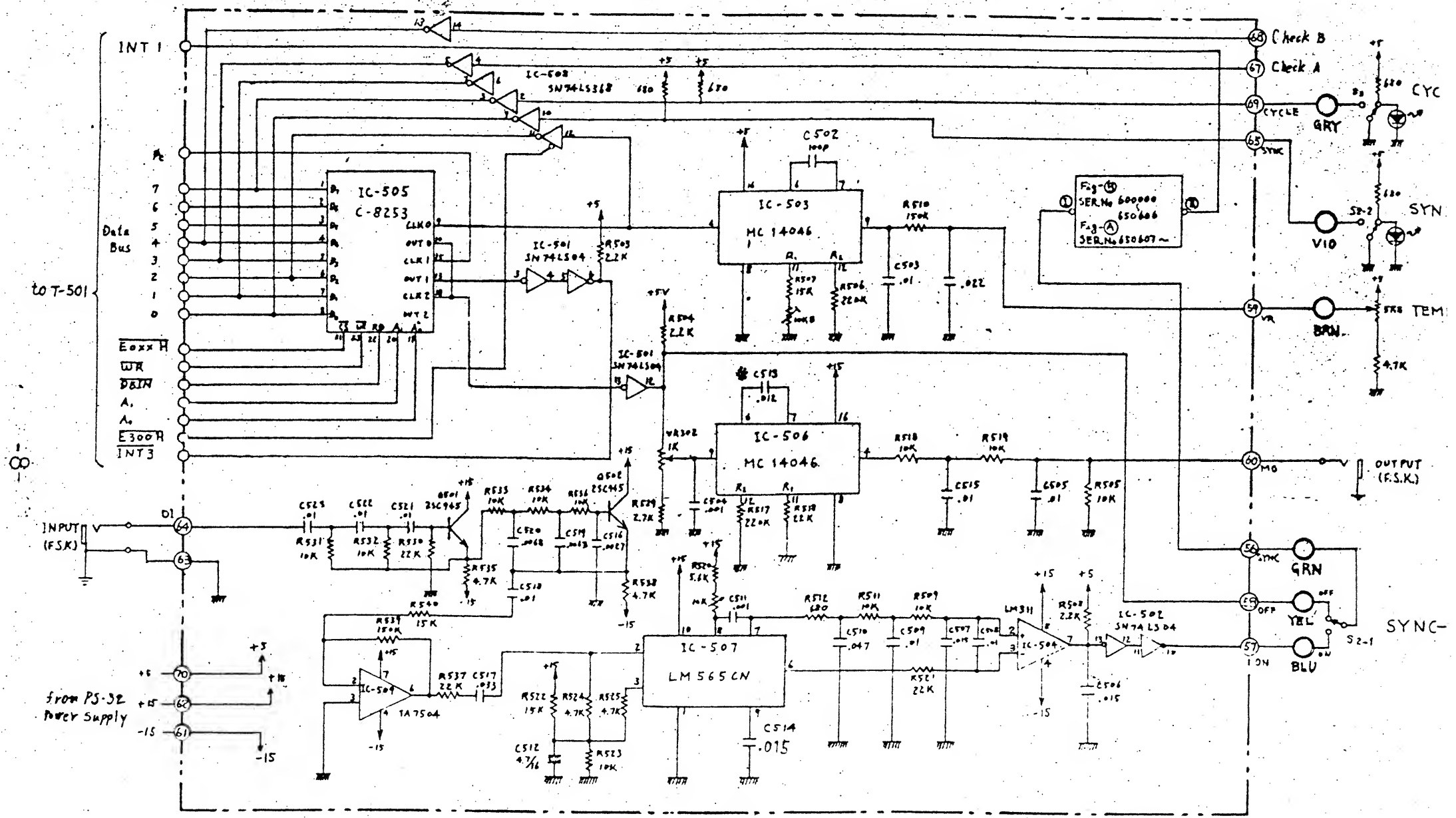
IC-Ⓐ
- ⓐ SER No. 600000 ~ 691009 → 74LS00
- ⓑ SER No. 701100 ~ → 74LS122

Circuit Board Assembly ( )-95B (149-095B)



- Resistor R-25J(±5%)
- Capacitor Mylar(±10%)
- Capacitor Tantalum(±10%)
- Capacitor Electolytic
- Capacitor Ceramic
- Capacitor Ceramic (0.1M/25V)
- E-B Transistor 2SC945Q
- E-B Transistor 2SC1923-R
- Diode 1S273
- Crystal Freguency HC-18 (18MHz)

OP-96 Timer Board Circuit Diagram



Note

0.1 μfd capacitors between certain IC power supply input pins and ground are not shown in this diagram.

Fig-A

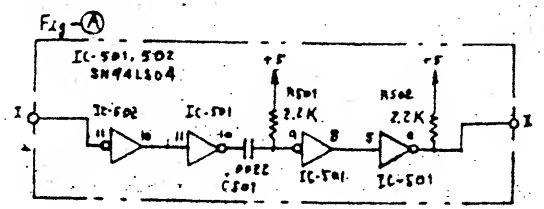
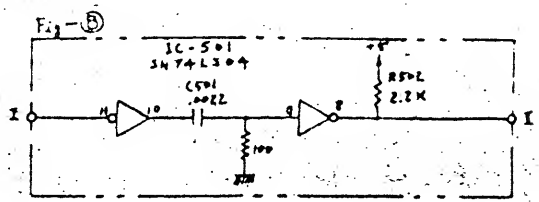
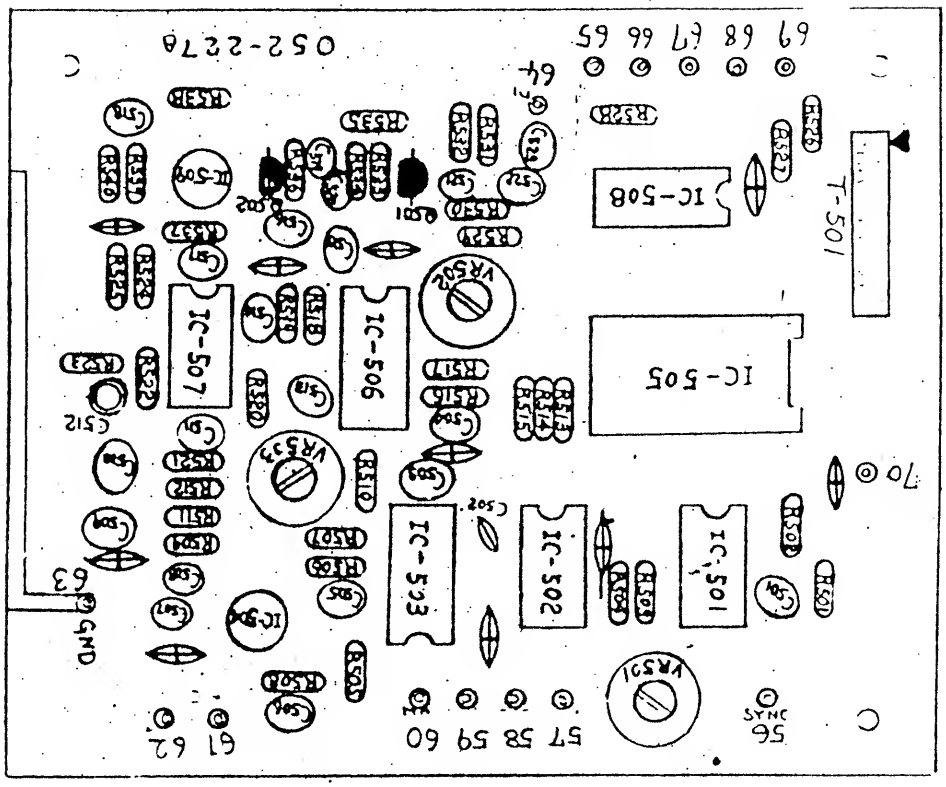


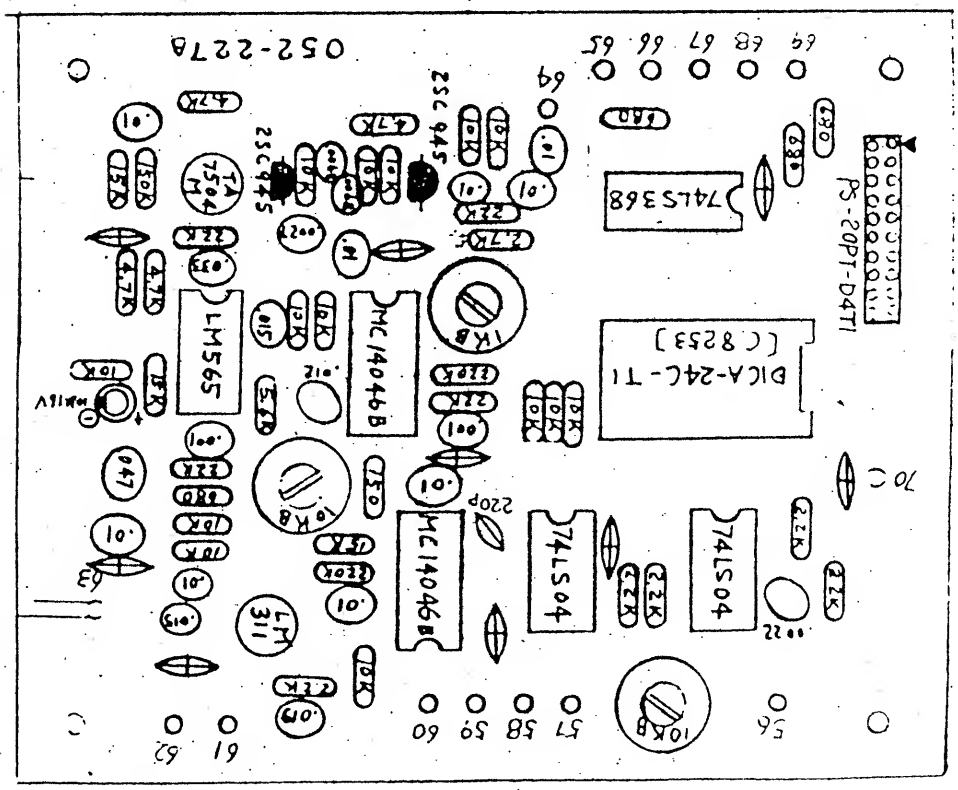
Fig-B



※ Capacitance is Calibrated

OP-96 Circuit Board Assembly





Resistor R-25J (±5%)

Capacitor, mylar (±10%)

Capacitor, electrolytic

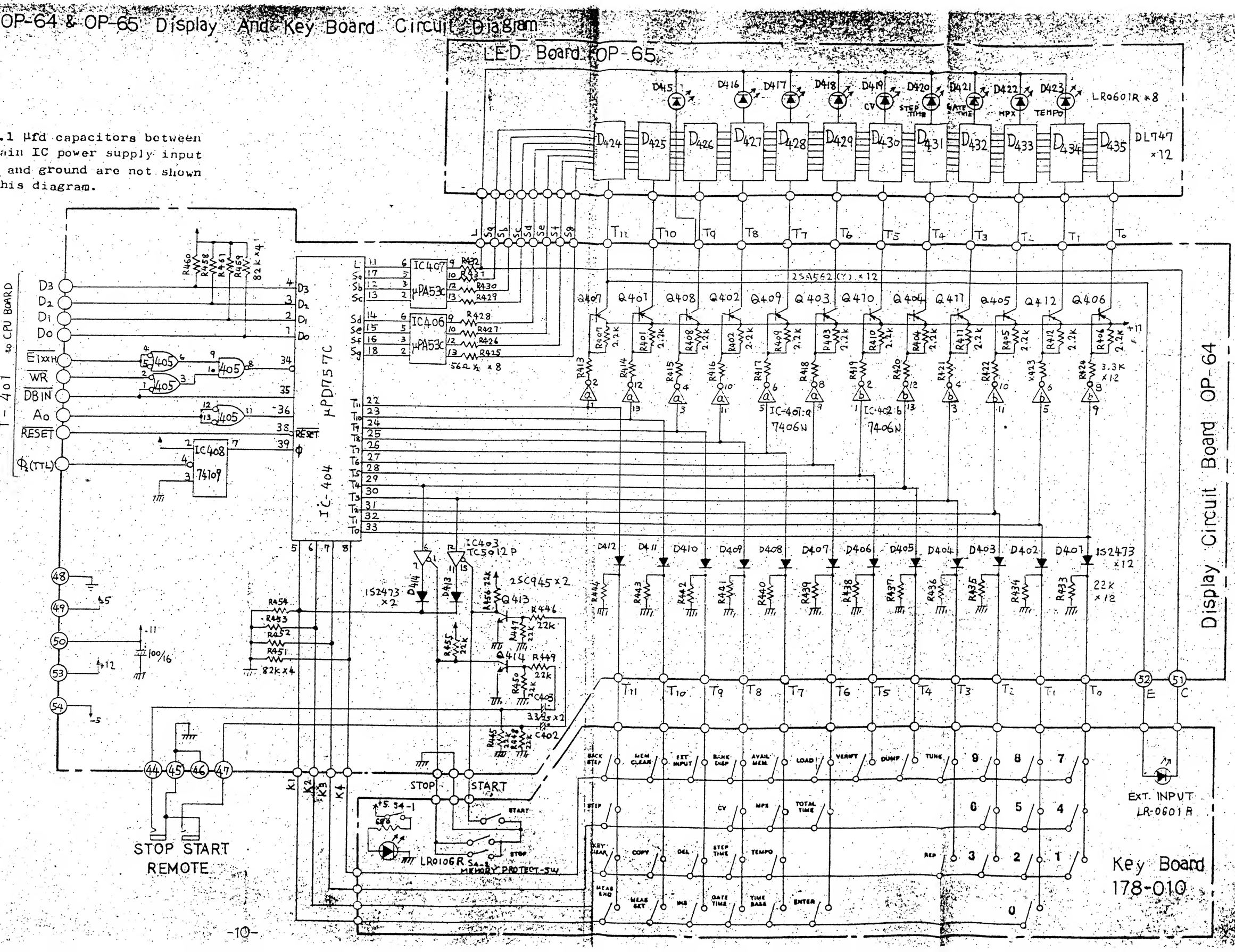
Capacitor, ceramic

Capacitor, ceramic (0.1/25v)

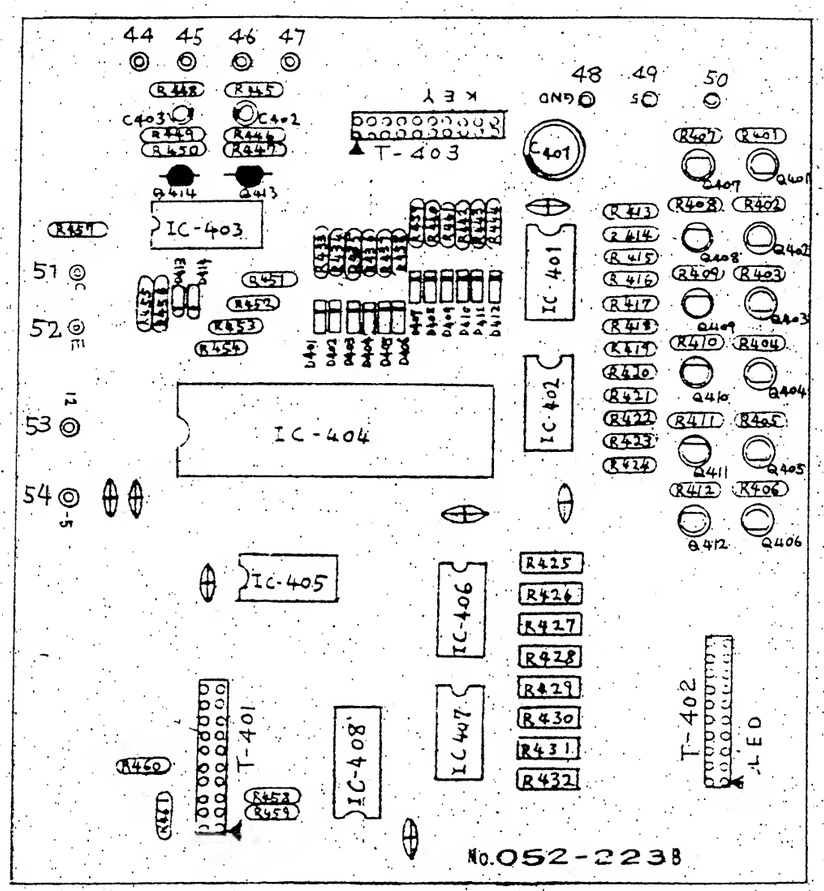
OP-64 & OP-65 Display And Key Board Circuit Diagram

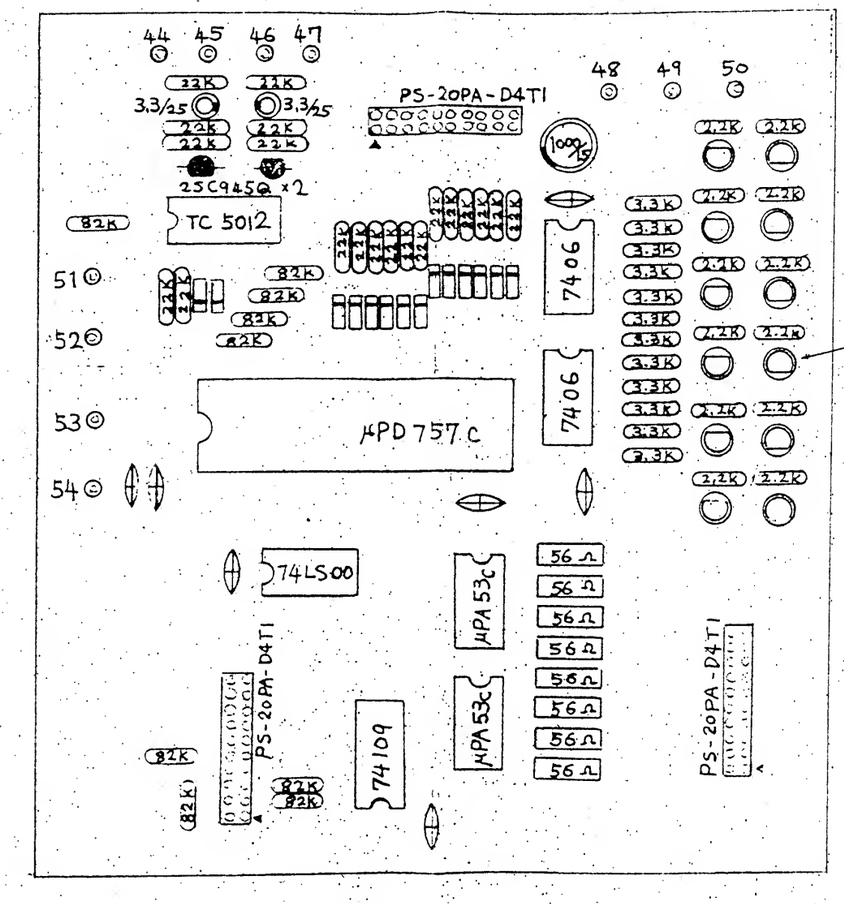
Note

0.1 μfd capacitors between certain IC power supply input pins and ground are not shown in this diagram.



Circuit Board Assembly OP-64(149-064) Display Board





Resistor R-25J(±5%)

Resistor 12GK(±10%)

+ Capacitor Electolytic -

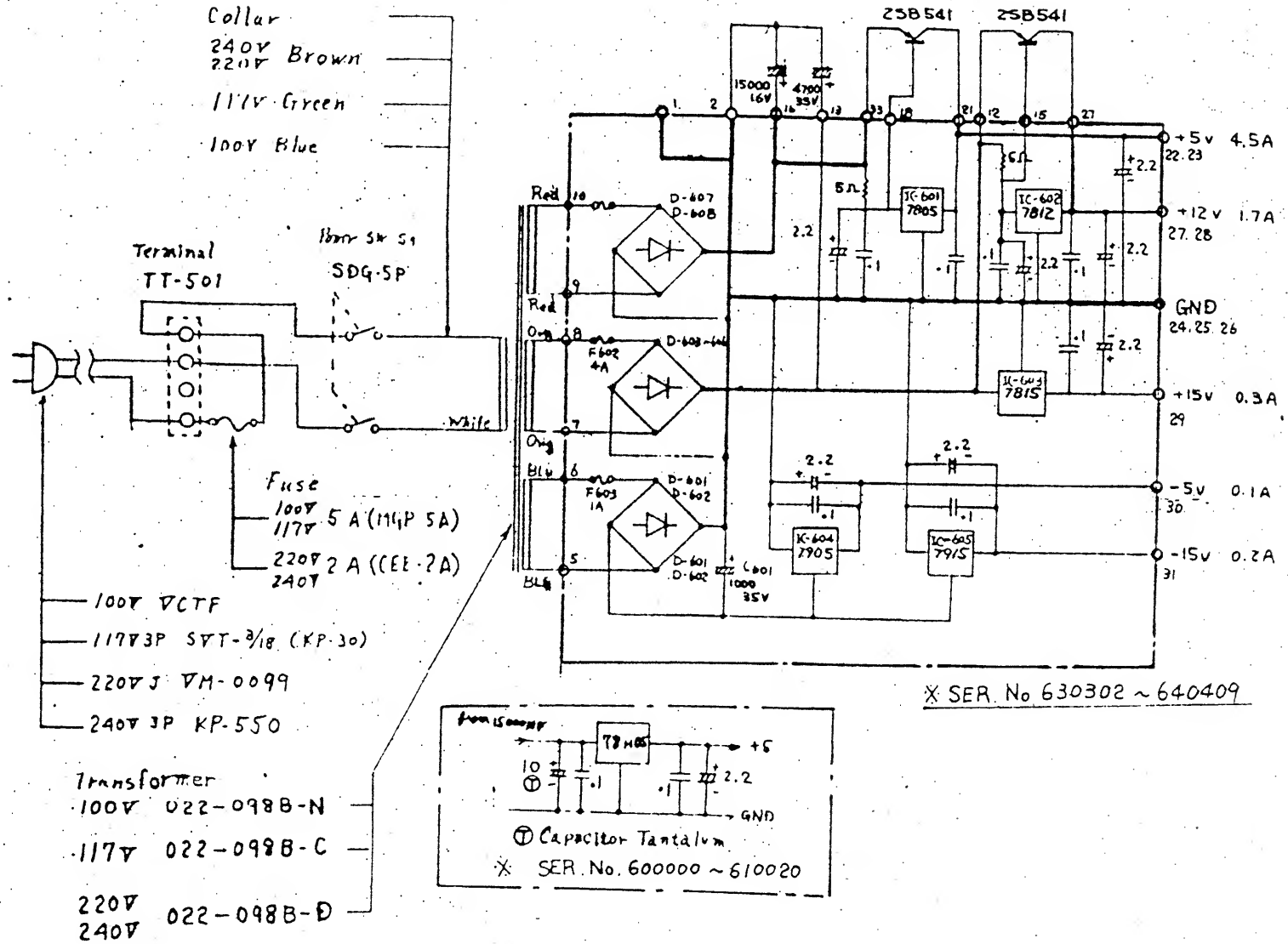
Capacitor Ceramic(0.1μ/25v)

Diode 1S2473

E B Transistor 2SC945Q

E B Transistor 2SA562Y

Power Supply Circuit Diagram PS-32A

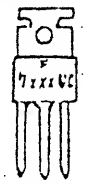


Power Supply Board Assembly PS-32B

Silicon Rect. Diodes
D601 ··· MI152 R
D602 ··· MI152
D603~606 ··· GP-25G ×4
D607 ··· 1S5151
D608 ··· 1S5151R

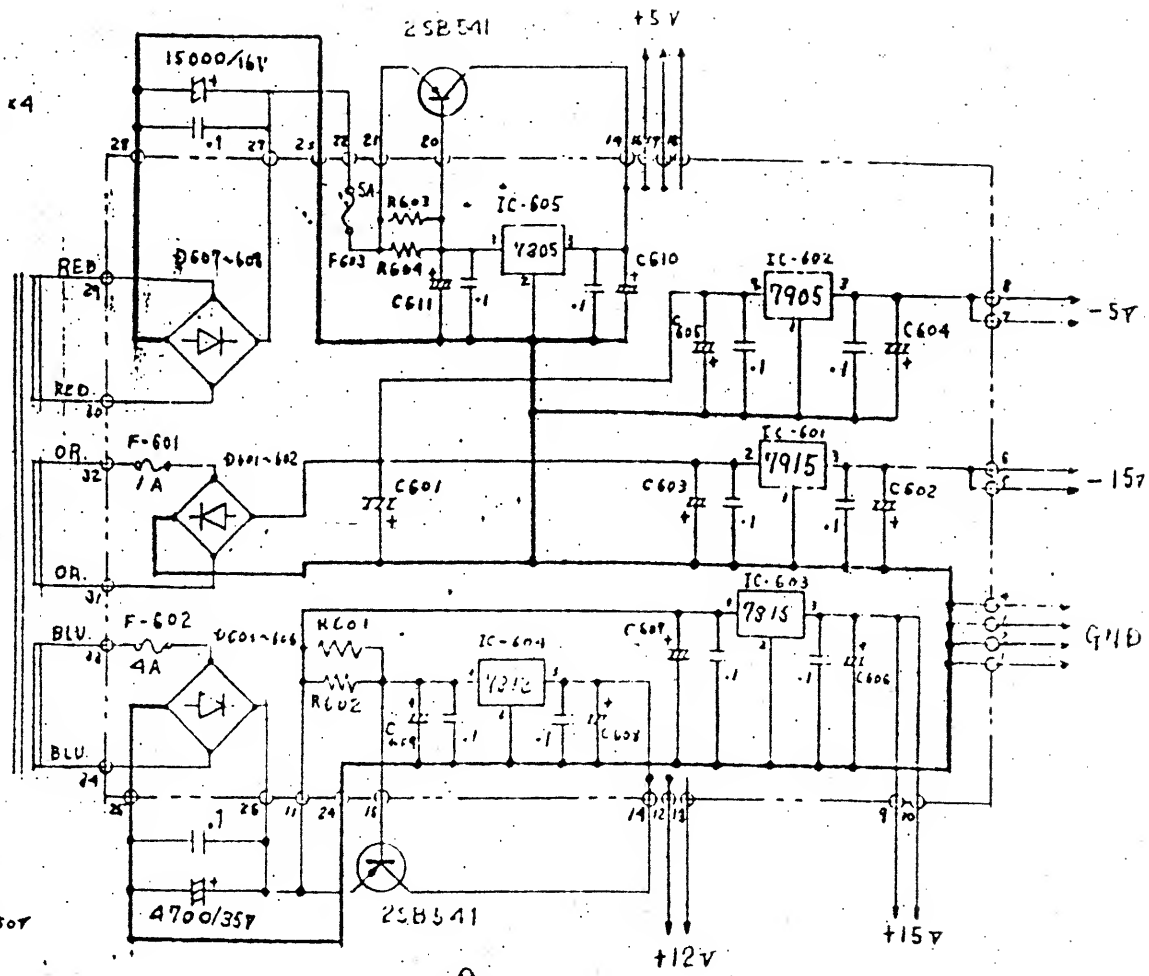
Resisters
R601~604 ··· ½W 6.8Ω

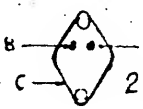
I.C
IC-601 ··· μA7915
IC-602 ··· μA7905
IC-603 ··· μA7815
IC-604 ··· μA7812
IC-605 ··· μA7805



Pin Connection

Electrolytic Capacitors
C601 ··· 1000μ / 35V
C602. C604 ··· 10μ / 16V
C603. C605~611 ··· 2.2μ / 50V
Other Capacitors
.1μ Disk Ceramic

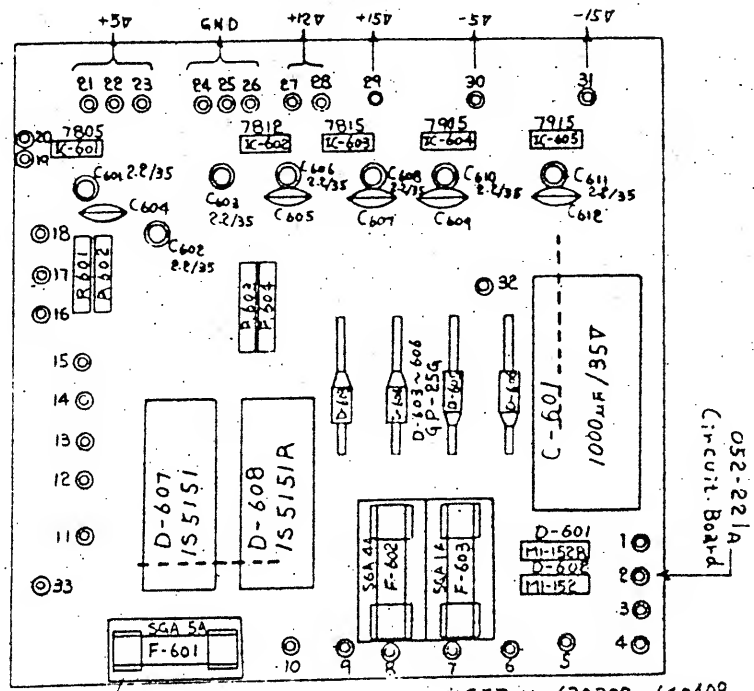




2SB541 Arrangement. (Bottom View)

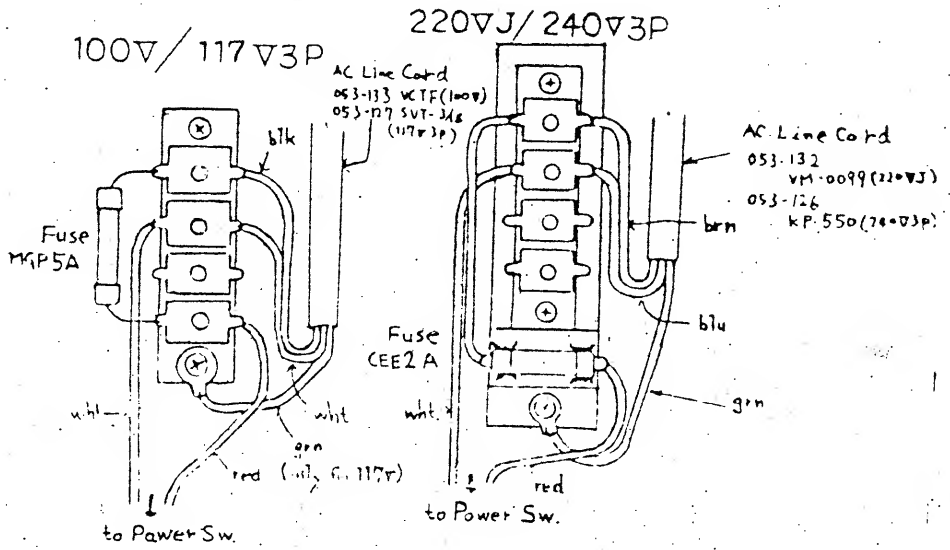
※ SER No. 640500~

Power Supply Board Assembly PS-32A

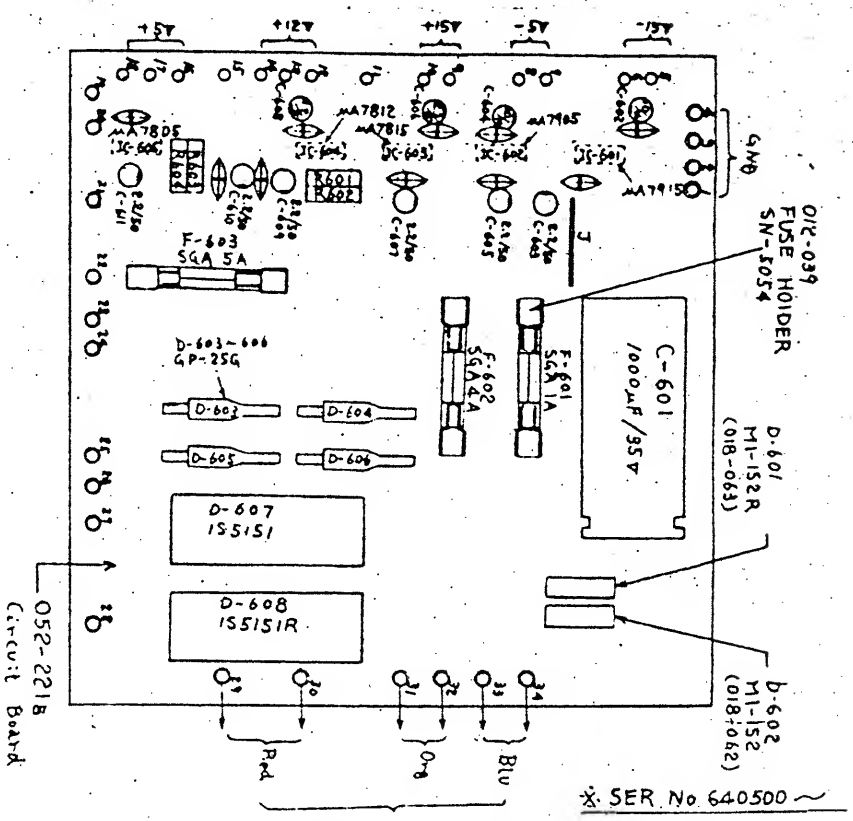


※SER. No 630302~640409

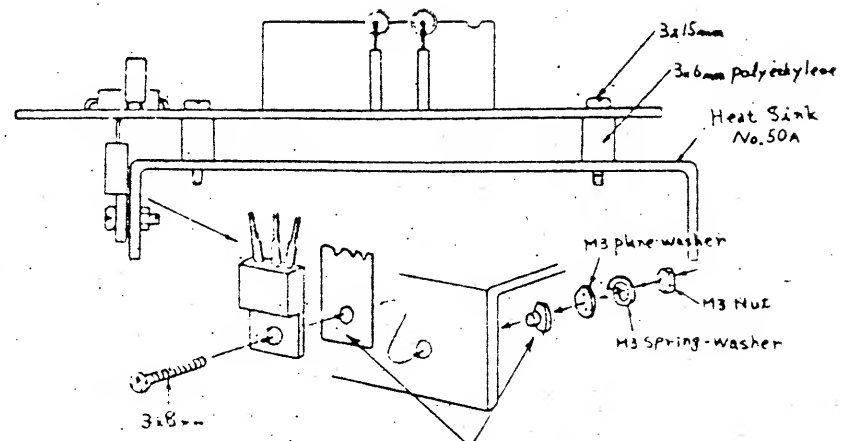
Fuse Holder TF-75B (012-003)



Power Supply Board Assembly PS-32B

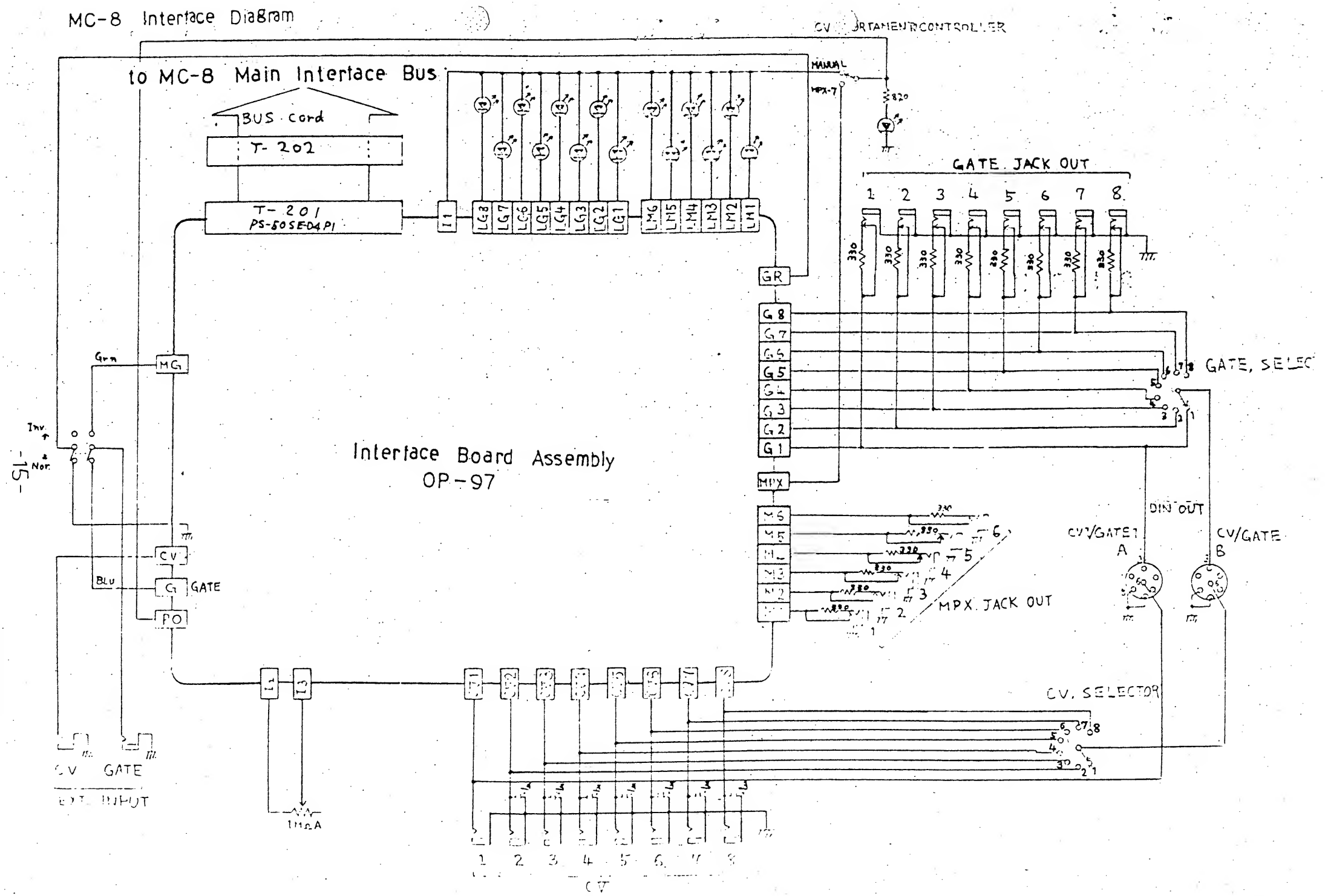


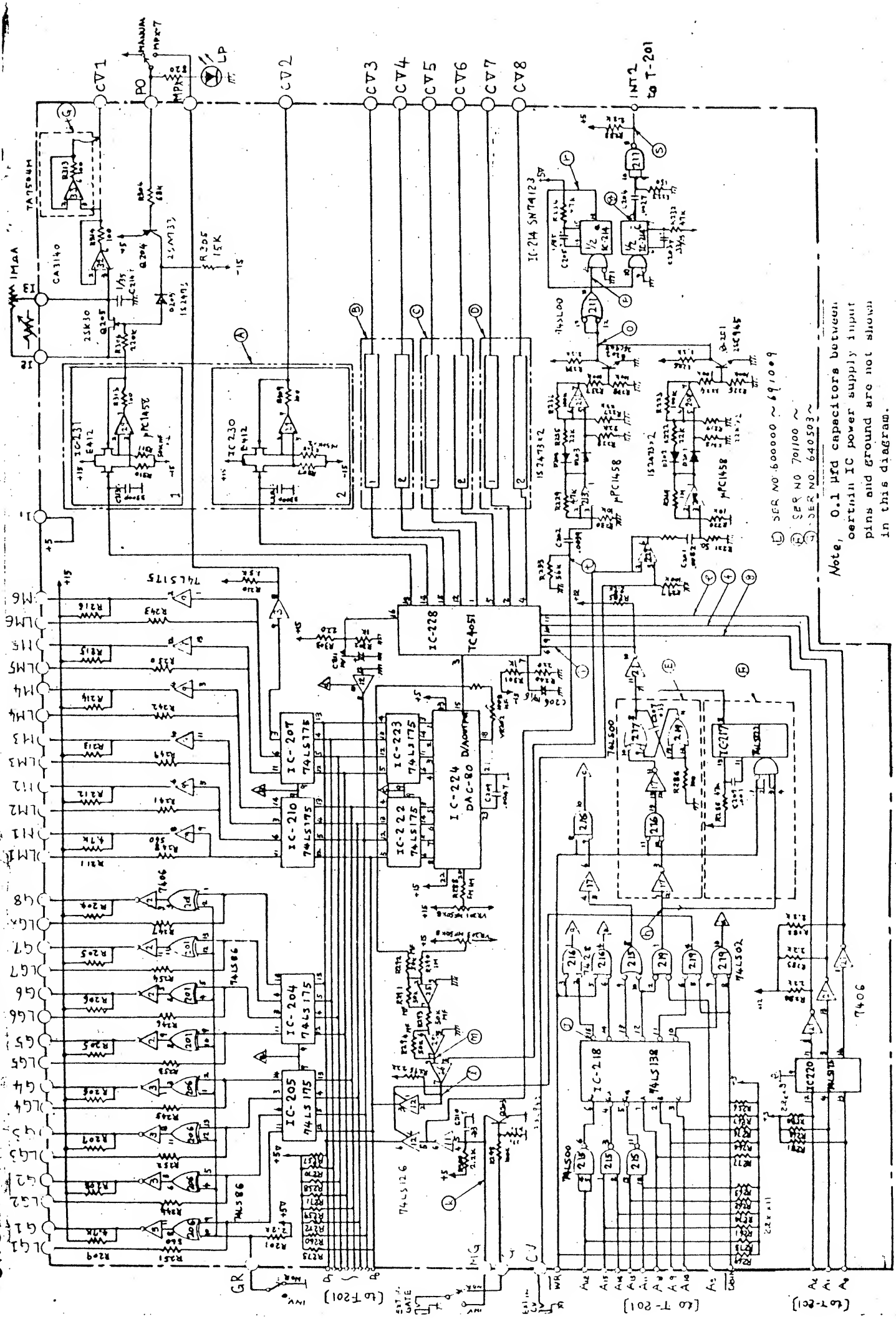
※SER. No 640500~



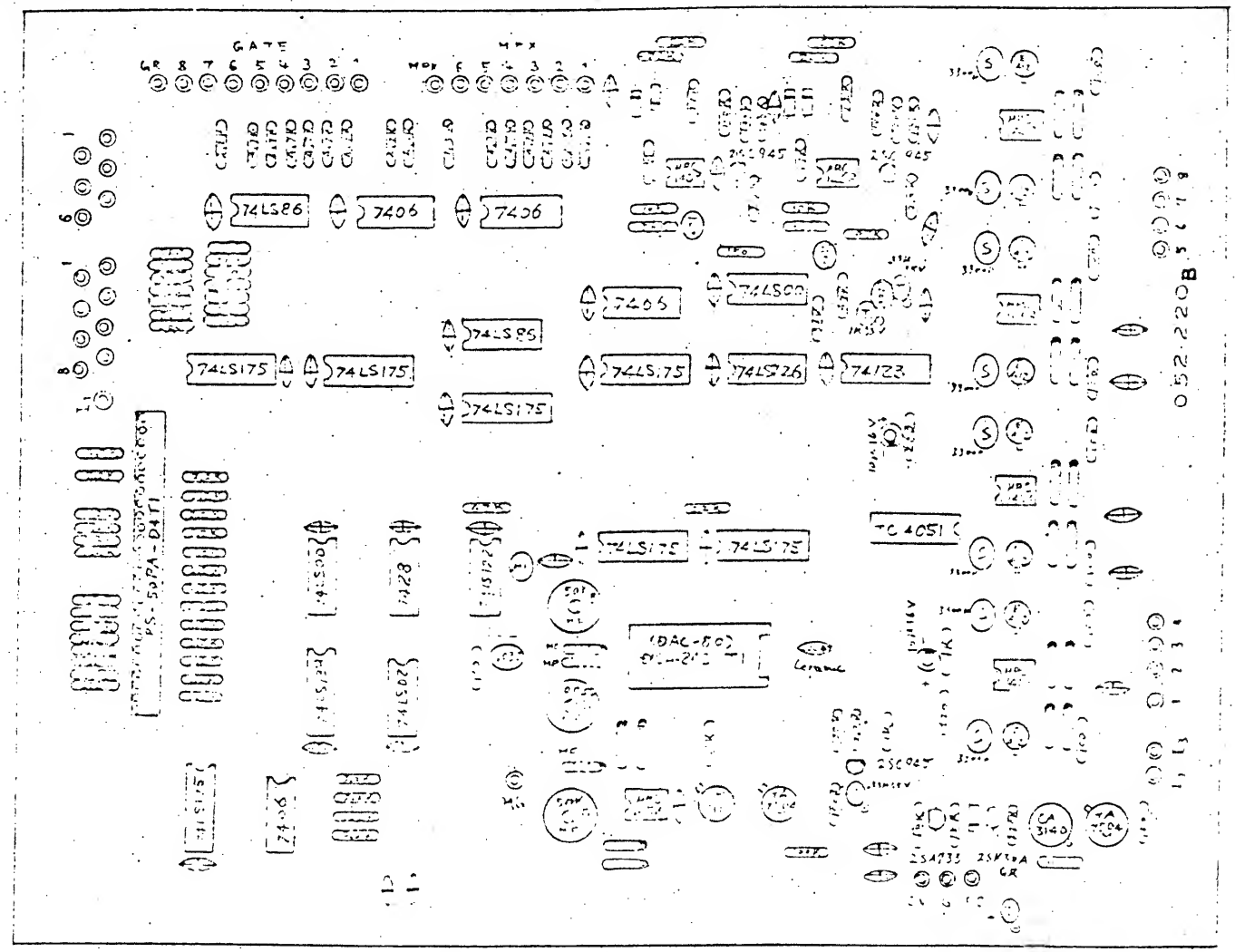
μA7805~7915 Assembly

※[Insulating Spacers may be omited when using; μA7805, μA7812, or μA7815.]


MC-8 Interface Diagram
to MC-8 Main Interface Bus
BUS cord
T-202
T-201
PS-50SE04P1
Interface Board Assembly
OP-97
MANUAL
MPX-7
820
GATE JACK OUT
1 2 3 4 5 6 7 8
330
GR
G8
G7
G6
G5
G4
G3
G2
G1
MPX
M6
M5
M4
M3
M2
M1
MPX JACK OUT
GATE SELEC
DIN OUT
CV/GATE A
CV/GATE B
CV SELECTOR
Grn
MG
Inv.
Nor.
CV
BLU
G
GATE
PO
CV GATE
EXT INPUT
1MΩA
LG8 LG7 LG6 LG5 LG4 LG3 LG2 LG1
LM6 LM5 LM4 LM3 LM2 LM1
I1
I3
CV


Circuit Diagram OP-97 (149-097)
CV1
PO
MPX
LP
CV2
CV3
CV4
CV5
CV6
CV7
CV8
INT2
To T-201
IC-214 SN74123
IC-228 TC4051
IC-224 DAC-80 D/A CONV
IC-207 74LS175
IC-223 74LS175
IC-222 74LS175
IC-210 74LS175
IC-204 74LS175
IC-205 74LS175
IC-218 74LS138
74LS00
74LS02
74LS86
74LS126
7406
Note, 0.1 μfd capacitors between certain IC power supply input pins and ground are not shown in this diagram.

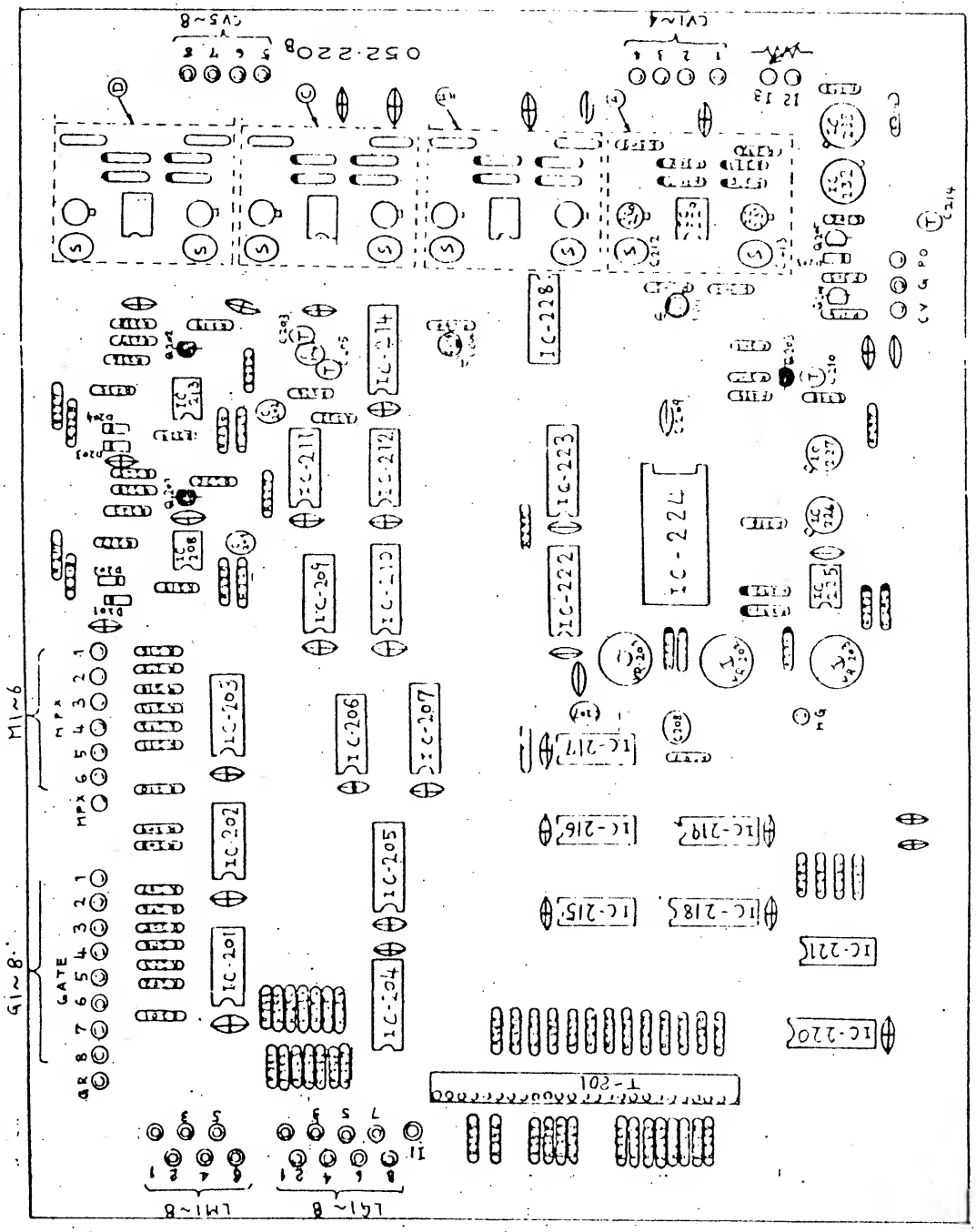
Circuit Board Assembly OP-97B (149-097B)



Resistor E-25J(±5%)
Metal Film Resistor (±1%)
Capacitor Mylar(±10%)
Capacitor Tantalum(±10%)
Capacitor Electrolytic
Capacitor Ceramic
Capacitor Ceramic (0.1μ/25V)
Capacitor Polystyrene

E-B Transistor 2SC945Q
E-B Transistor 2SC1923-R
S-D FET 2SK30GR
Diode 1S273

Circuit Board Assembly OP-97B (149-097B)



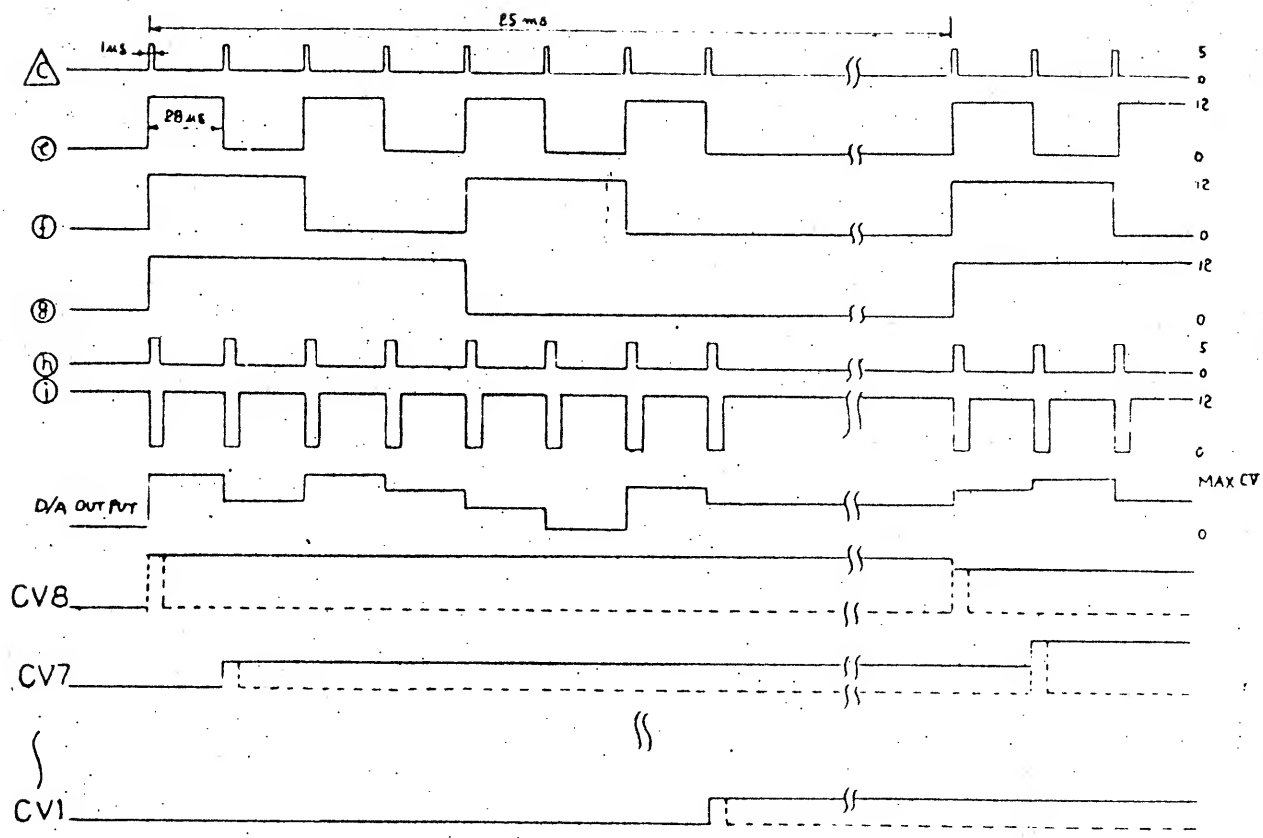


Fig 3 CV Output Timing Diagram.

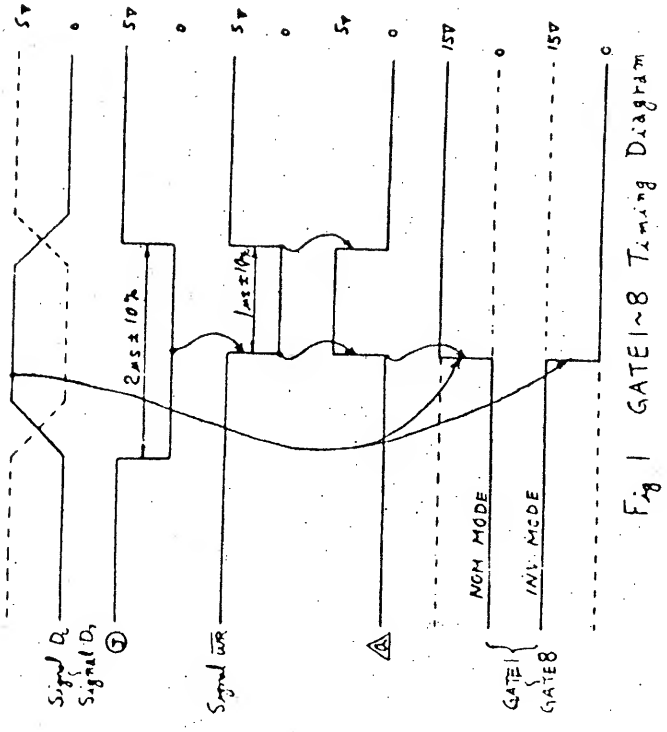


Fig 1 GATE1~8 Timing Diagram

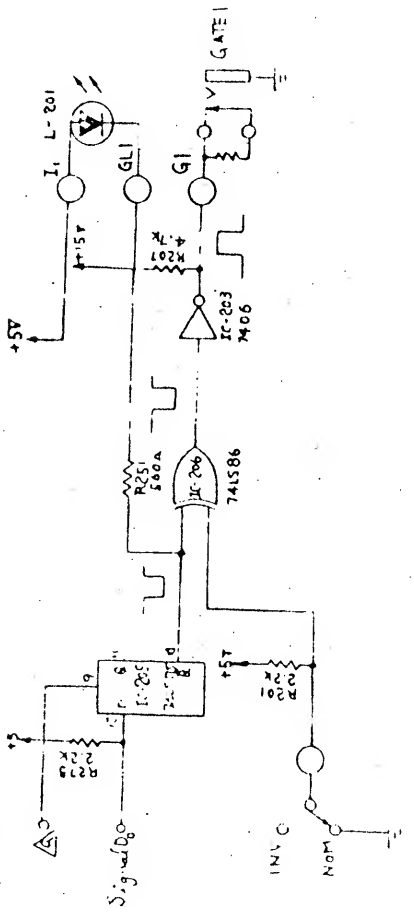
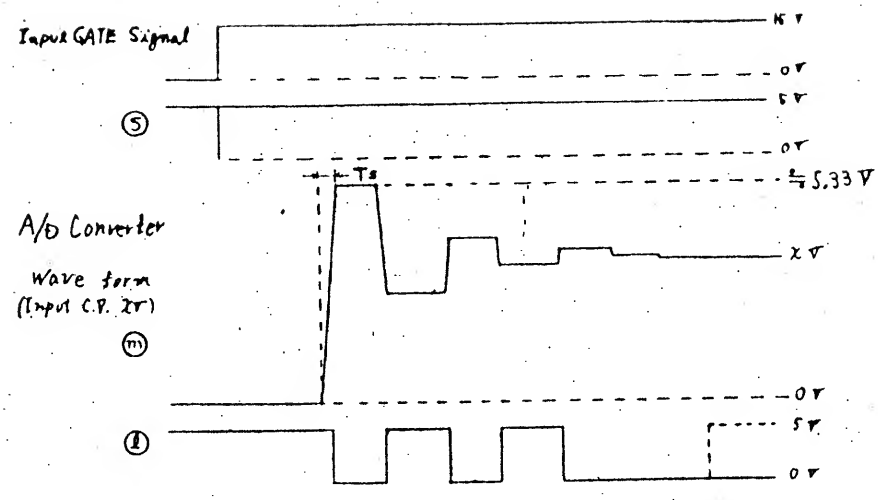


Fig 2 GATE1 Circuit Diagram

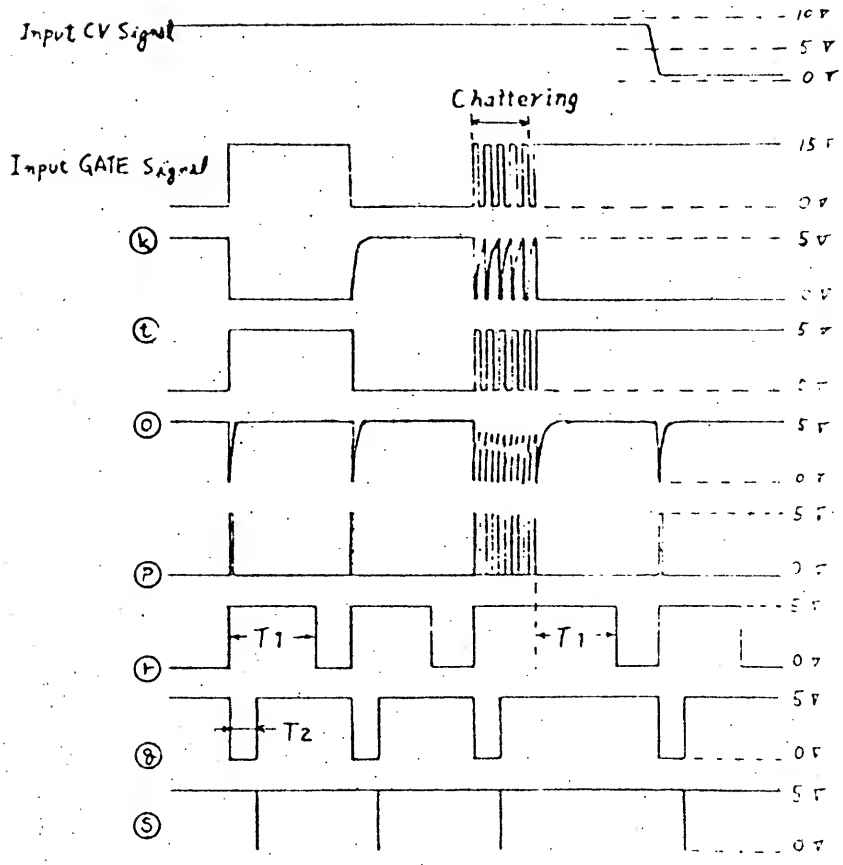


Ts --- Min 0 μs Max 7 μs

"Ts" is setup time by Slewrate of OP. Amp.

Fig. 5 EXT. CV A/D Converter wave form.

Fig 5 EXT. CV Timing Diagram.



T1 --- 13.4 ms ±15 %

T2 --- 4.4 ms ±15 %

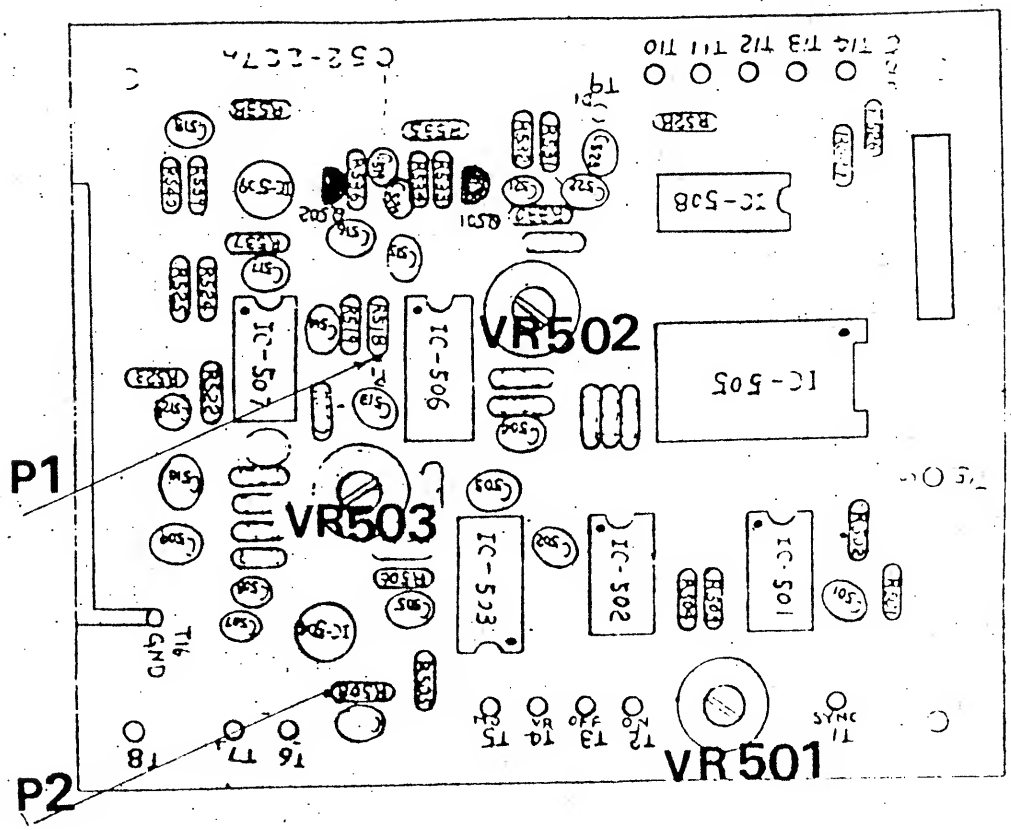
Fig 4 EXT. GATE Timing Diagram

ADJUSTMENT

For Disassembly, refer to MC-8 Instruction Manual Section 18

Fig. 1

TIMER BOARD



TEMPO ADJUSTMENT

Before adjustment, turn off the power switch once to erase any preceeding data.

1. Load Program A.
2. Set TEMPO knob at "0".

Program A

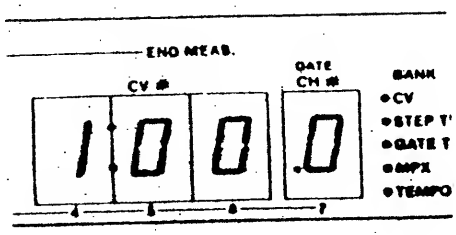
TIME BASE = 20

TEMPO = 60

MEASURE	STEP	CV	STEP TIME
1	1	24	20
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
		C x 5	
		M 1	
		M 1	

3. While pushing [TOTAL TIME] repeatedly,

adjust VR-501 for:



SYNC. FSK ADJUSTMENT

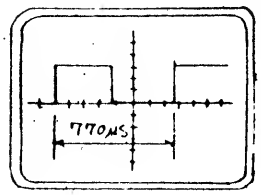
Program B
TIME BASE = 16
TEMPO = 60

Turn off the power switch once to erase the preceeding

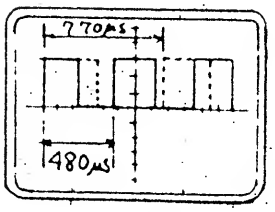
1. Connect oscilloscope lead to P1 (R518). -Fig.1

MEASURE	STEP	CV	STEP TIME
1	1	24	10
	2		
	3		
	4		
	5		
	6		
	7		
	8		
2 ~ 11		C x 10 M 1 M 1	

2. Place a capacitor with appropriate value for C513 so that one period of waveform is 770uS±10uS.



3. Load Program B and push CYCLE and START.

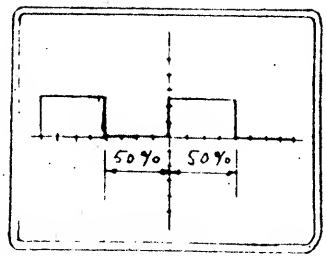


A composite waveform of two frequencies will appear.
Adjust VR-502 so that the shorter waveform period becomes 480uS±10uS.

4. Patch the SYNC OUT jack to the SYNC IN jack on the rear panel of the MC-8.

Push STOP; shift oscilloscope lead to P2 (Fig.1)
Change TIME BASE to 64, TEMPO to 240.

Adjust VR-503 so that waveform has a duty ratio of 50%.



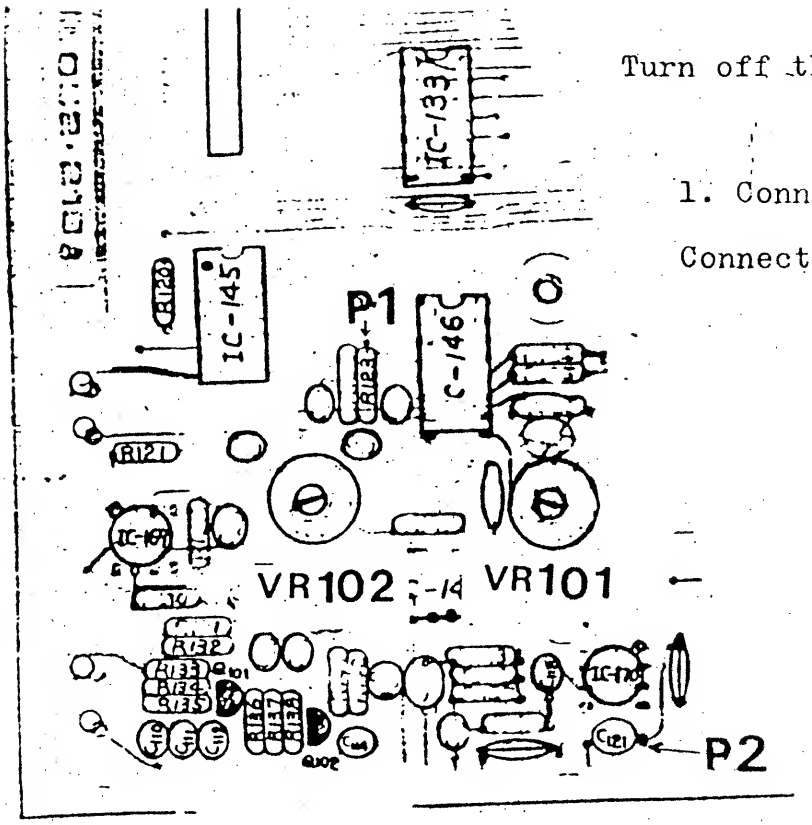


Fig. 2 CPU Board

Turn off the power switch to erase the preceeding data.

1. Connect oscilloscope lead to P1 (Fig.2

Connect patch cord between DUMP and LOAD jacks.

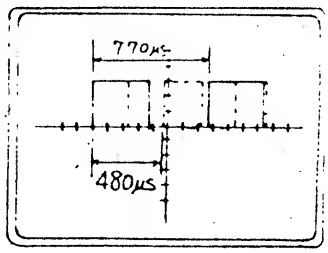
Load Program C and push [DUMP].

Program C

MESURE	STEP	CV
1	1	85
	2	|
	≀	|
	10	|
2		Cx2
≀		M1
3		M1
4		Cx99
≀		M1
300		M3

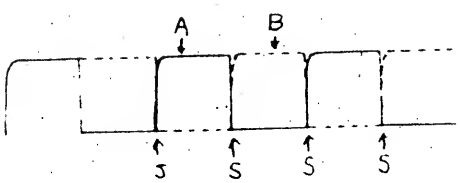
A composite waveform of two frequencies will appear.
Place a capacitor with appropriate value for C102 so that longer waveform period is 770uS±10uS.

Adjust VR-101 so that shorter waveform becomes 480uS±10uS.

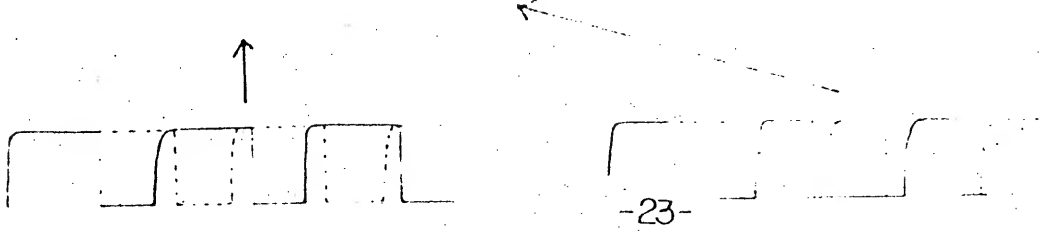


If Program runs out before adjustment completes, Push [DUMP] again.

2. Shift oscilloscope lead to P2.



Adjust VR-102 so that leading edge of B/A is superimposed upon the trailing edge of A/B - points S -



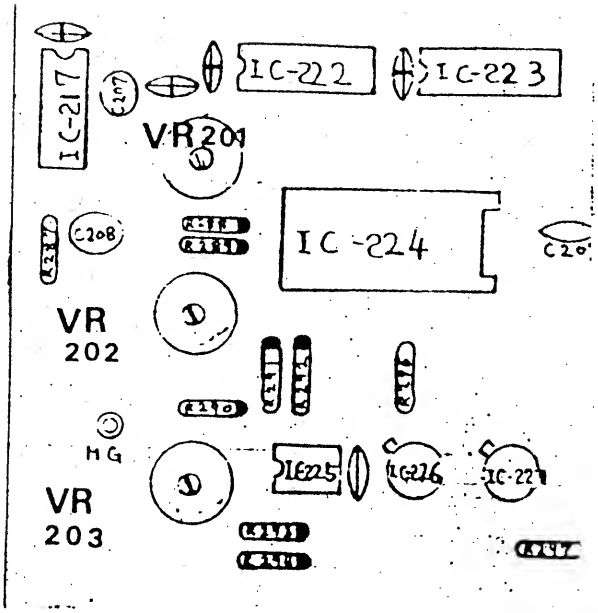


Fig. 3

Connect Bus Cord between MC-8 and Interface.

Connect a digital voltmeter to the CV-1 jack on the front panel of the INTERFACE.

Turn PORTAMENTO fullcounterclockwise.

1. Write "0" into CV-1 memory and adjust VR-201 for 0.00V±1mV.

   Write "120" into CV-1 memory and adjust VR-202 for 10.00V±1mV.

CV	CV out	CV	CV out
0	0V	72	6V
12	1V	84	7V
24	2V	96	8V
36	3V	108	9V
48	4V	120	10V
60	5V		

2. Write "12" to "84" into CV-1 memory in sequence shown at the left and check respective voltages, readjust VR-202 if error is more than ±1mV.

In practical applications, accuracy of linearity is important only between 0V and about +6V; devations of voltages above this are not so important.

Program D

TIME BASE = 32

TEMPO = 120

MEASURE	STEP	CV	STEP TIME	GATE TIME
1	1	0	10	5
	2	12		
	3	24		
	4	36		
	5	48		
	6	60		
	7	72		
	8	84		
	9	96		
	10	108		
	11	120		
2 ~ 10		C x 9 M 1 M 1.		

3. Load Program D into CV-1 memory.

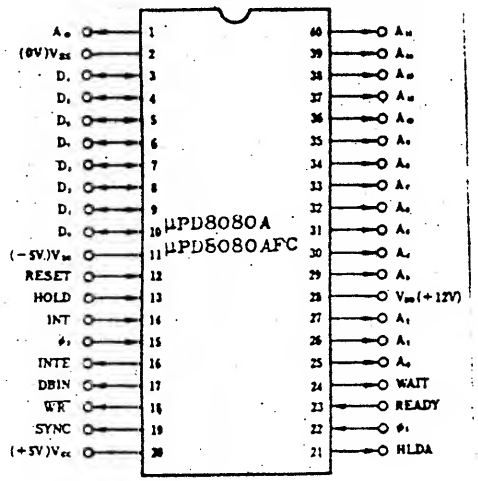
Connect CV-1 OUT to EXT INPUT CV and GATE-1 OUT to EXT INPUT GATE.

Set up the MC-8 programing so that CV-2 memory will accept data from CV-1.

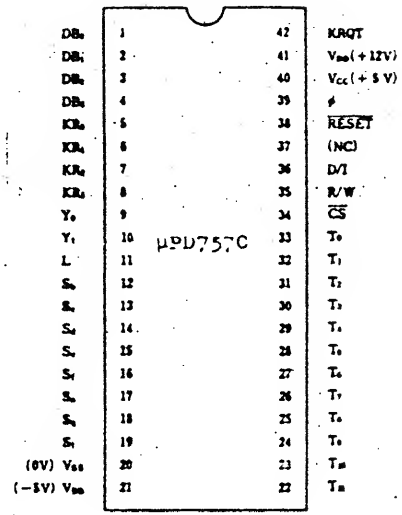
Push CYCLE and START.

Adjust VR-203 so that correct numbers shown in Program D are displayed in sequence.

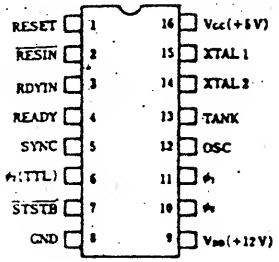
Connection Diagram (Top View)



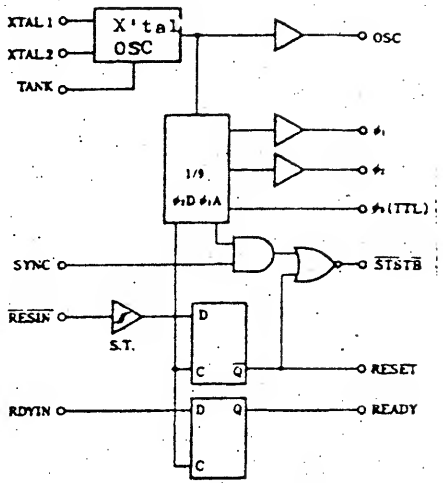
Connection Diagram (Top View)

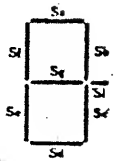


Connection Diagram (Top View)

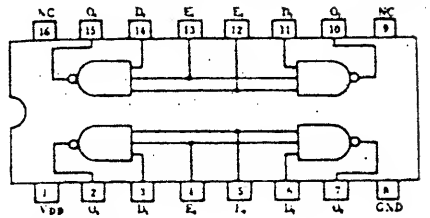


Block Diagram

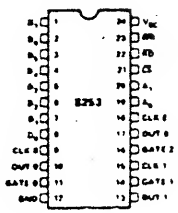




Connection Diagram (Top View)

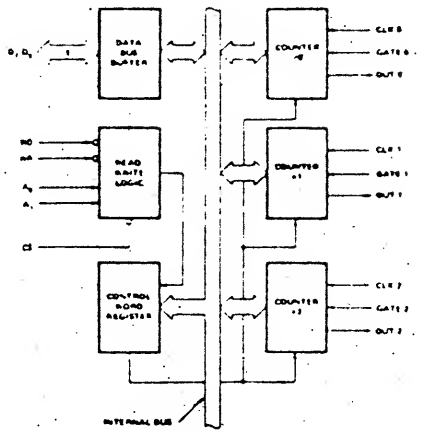


PIN CONFIGURATION

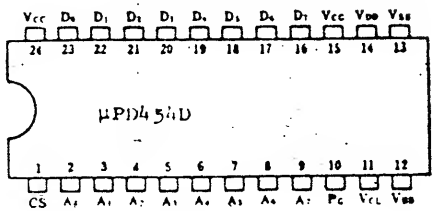


PIN NAMES

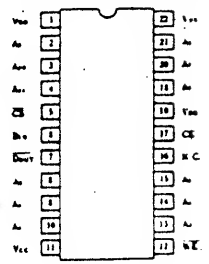
BLOCK DIAGRAM



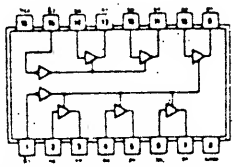
Connection Diagram (Top View)



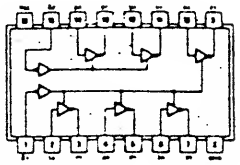
Connection Diagram (Top View)



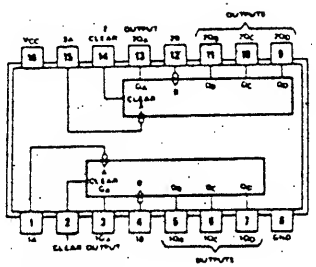
μPD410D



SN74LS367
Noninverted
Bus Buffers

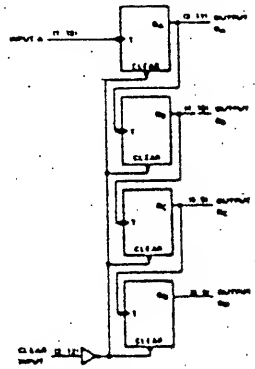


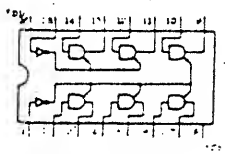
SN74LS368
Inverted
Bus buffers



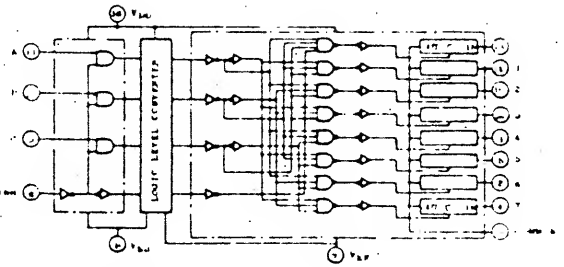
SN74LS393
4-bit Binary Counter

COUNT	OUTPUT			
	Q_D	Q_C	Q_B	Q_A
0	L	L	L	L
1	L	L	L	H
2	L	L	H	L
3	L	L	H	H
4	L	H	L	L
5	L	H	L	H
6	L	H	H	L
7	L	H	H	H
8	H	L	L	L
9	H	L	L	H
10	H	L	H	L
11	H	L	H	H
12	H	H	L	L
13	H	H	L	H
14	H	H	H	L
15	H	H	H	H





TC5012BP
3-state Noninverted Buffer

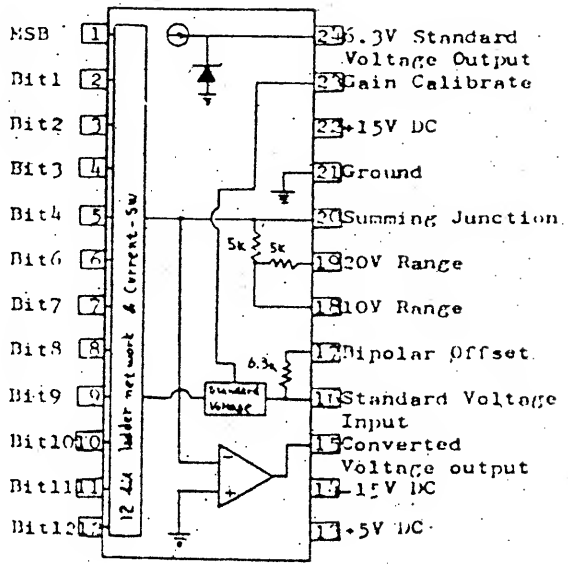


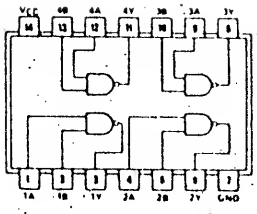
CONTROL INPUTS				"ON" CHANNEL		
INHIBIT	C	B	A	TC4051BP	TC4053BP	TC4067BP
L	L	L	L	0	0Z, 0Y	0Z, 0Y, 4Z
L	L	L	H	1	1Z, 1Y	1Z, 0Y, 0Z
L	L	H	L	2	2Z, 2Y	2Z, 1Y, 0Z
L	L	H	H	3	3Z, 3Y	3Z, 1Y, 0Z
L	H	L	L	4	-	0Z, 0Y, 1Z
L	H	L	H	5	-	1Z, 0Y, 1Z
L	H	H	L	6	-	2Z, 1Y, 1Z
L	H	H	H	7	-	3Z, 1Y, 1Z
H	*	*	*	NONE	NONE	NONE

* Don't Care

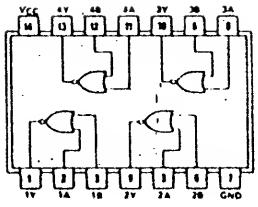
TC4051BP
8-channel Multiplexer

DAC-80

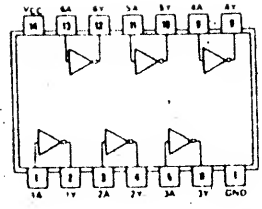




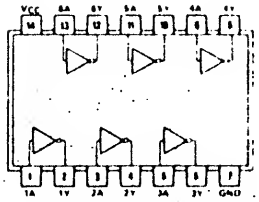
SN74LS00
2-INPUT NAND



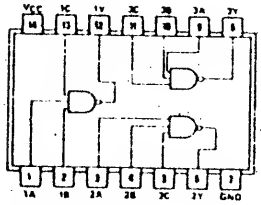
SN74LS02
2-INPUT NOR



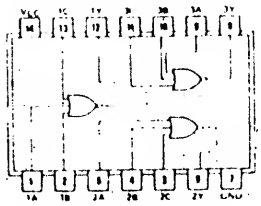
SN74LS04
INVERTERs



SN7406
Open-collector
INVERTERs



SN74LS10
3-INPUT NAND



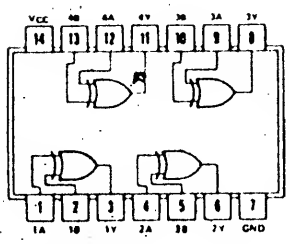
SN74LS27
3-INPUT NOR

SN7428
2-INPUT NOR
Buffers

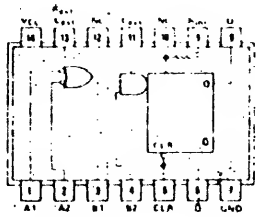
SN74109
J-K positive edge triggered F/F

FUNCTION TABLE

INPUTS					OUTPUTS	
PRESET	CLEAR	CLOCK	J	K	Q	$\bar{Q}$
L	H	X	X	X	H	L
H	L	X	X	X	L	H
L	L	X	X	X	H*	H*
H	H	↓	L	L	L	H
H	H	↓	H	L	TOGGLE	
H	H	↓	L	H	Q_0	$\bar{Q}_0$
H	H	↓	H	H	H	L
H	H	L	X	X	Q_0	$\bar{Q}_0$



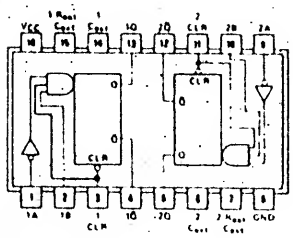
SN74LS86
2-INPUT
Exclusive-OR



SN74LS122
monostable
Multivibrator

FUNCTION TABLE

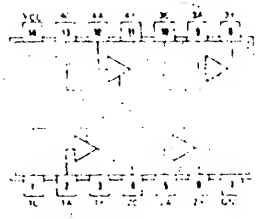
INPUTS					OUTPUTS	
CLEAR	A1	A2	B1	B2	Q	$\bar{Q}$
L	X	X	X	X	L	H
X	H	H	X	X	L	H
X	X	X	L	X	L	H
X	X	X	X	L	L	H
H	L	X	↑	H	⎍	⎍
H	L	X	H	↑	⎍	⎍
H	X	L	↑	H	⎍	⎍
H	X	L	H	↑	⎍	⎍
H	H	↓	H	H	⎍	⎍
H	↓	H	H	H	⎍	⎍
↑	L	X	H	H	⎍	⎍
↑	X	L	H	H	⎍	⎍



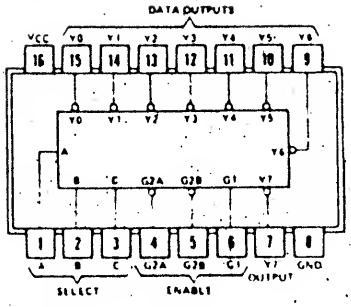
SN74123
Monostable
Multivibrators

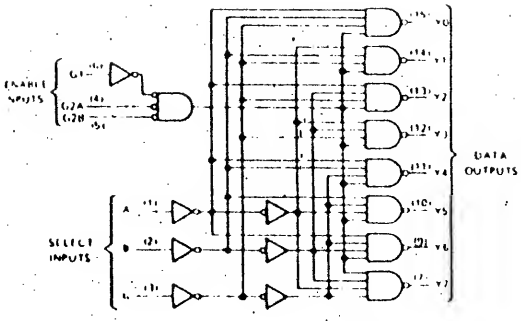
FUNCTION TABLE

INPUTS			OUTPUTS	
CLEAR	A	B	Q	$\bar{Q}$
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↑	⎍	⎍
H	↓	H	⎍	⎍
↓	↑	H	⎍	⎍



SN74126
Bus-Buffer Gates
with three-state outputs



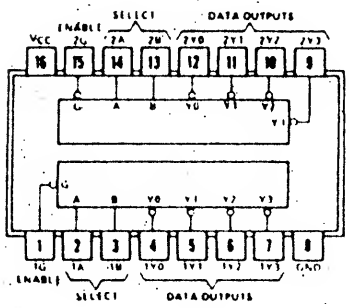


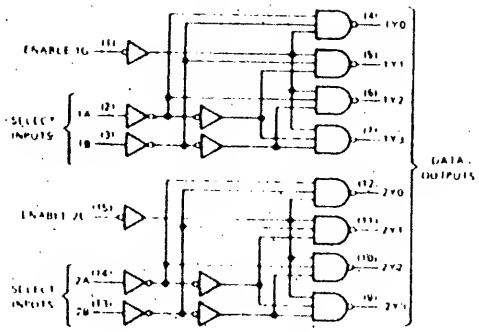
INPUTS					OUTPUTS							
ENABLE		SELECT										
G1	G2*	C	B	A	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7
X	H	X	X	X	H	H	H	H	H	H	H	H
L	X	X	X	X	H	H	H	H	H	H	H	H
H	L	L	L	L	L	H	H	H	H	H	H	H
H	L	L	L	H	H	L	H	H	H	H	H	H
H	L	L	H	L	H	H	L	H	H	H	H	H
H	L	L	H	H	H	H	H	L	H	H	H	H
H	L	H	L	L	H	H	H	H	L	H	H	H
H	L	H	L	H	H	H	H	H	H	L	H	H
H	L	H	H	L	H	H	H	H	H	H	L	H
H	L	H	H	H	H	H	H	H	H	H	H	L

*G2 = G2A + G2B

H = high level, L = low level, X = irrelevant

SN74LS138
3-to-8 line Decorder

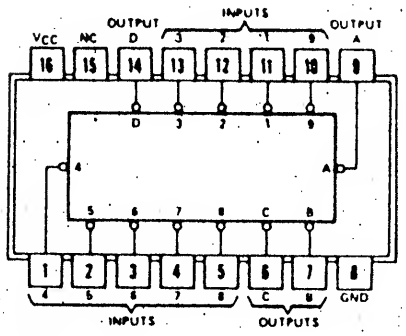




INPUTS			OUTPUTS			
ENABLE	SELECT					
G	B	A	Y0	Y1	Y2	Y3
H	X	X	H	H	H	H
L	L	L	L	H	H	H
L	L	H	H	L	H	H
L	H	L	H	H	L	H
L	H	H	H	H	H	L

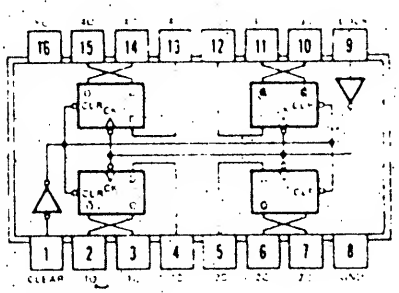
H = high level, L = low level, X = irrelevant

SN74LS139
2-to-4 line Decorders



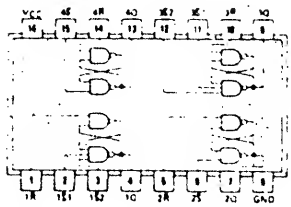
INPUTS									OUTPUTS				
EI	0	1	2	3	4	5	6	7	A2	A1	A0	GS	EO
H	X	X	X	X	X	X	X	X	H	H	H	H	H
L	H	H	H	H	H	H	H	H	H	H	H	H	L
L	X	X	X	X	X	X	X	L	L	L	L	L	H
L	X	X	X	X	X	X	L	H	L	L	H	L	H
L	X	X	X	X	X	L	H	H	L	H	L	L	H
L	X	X	X	X	L	H	H	H	L	H	H	L	H
L	X	X	X	L	H	H	H	H	H	L	L	L	H
L	X	X	L	H	H	H	H	H	H	L	H	L	H
L	X	L	H	H	H	H	H	H	H	H	L	L	H
L	L	H	H	H	H	H	H	H	H	H	H	L	H

SN74148
8-to-3 line Priority Encorder



INPUTS			OUTPUTS	
CLEAR	CLOCK	D	Q	$\bar{Q}$
L	X	X	L	H
H	↑	H	H	L
H	↑	L	L	H
H	L	X	Q_0	$\bar{Q}_0$

SN74LS175
D-type F/F

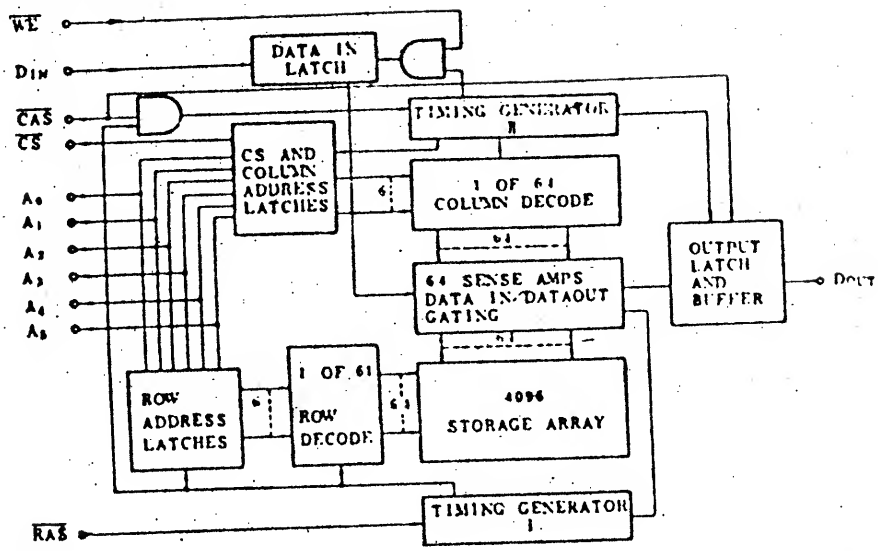


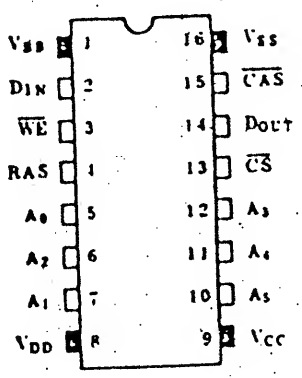
INPUTS		OUTPUT
$\bar{S}$	$\bar{R}$	Q
H	H	Q_0
L	H	H
H	L	L
L	L	H*

SN74279
S-R Latches

TMM415

BLOCK DIAGRAM





(Top View)

A_0-A_5	Address Input
$\overline{CAS}$	Column Adr Strobe
$\overline{CS}$	Chip Select
D_{IN}	Data Input
D_{OUT}	Data Output
$\overline{RAS}$	Row Adr Strobe
$\overline{WE}$	Write Enable
V_{BB}	Power(-5V)
V_{CC}	Power(+5V)
V_{DD}	Power(-12V)
V_{SS}	Ground

MC-8 MicroComposer and Interface Parts List

Part Number	Part and Description	
178-010	keyboard assembly	
-011	rear panel assembly	
-012	bottom chassis assembly	
-013	main panel assembly	
-021	sub-chassis assembly, interface	
-030	bus cord	
061-145B	chassis, left	(chassis no. 145)
-146B	" , right	(" " 146)
-147B	sub-chassis, keyboard	(" " 147)
-148C	chassis, bottom	(" " 148)
-149C	" , top	(" " 149)
-163B	sub-chassis, interface	(" " 163)
-164	chassis, interface	(" " 164)
-165B	" , " , left	(" " 165)
-166B	" , " , right	(" " 166)
072-148	main panel	(panel no. 148)
-149C	rear panel	(" " 149)
-150A	acrylic panel	(" " 150)
-161C	panel, interface	(" " 161)
083-009C	side panel, left	(side panel no. 9)
-014B	side panel, right	(" " " 14)
146-032	PS-32 power supply board assembly	
149-063	OP-63 CPU board assembly	
-064	OP-64 display board assembly	
-065	OP-65 LED board assembly	
-066	OP-66 timer board assembly	
-067	OP-67 interface board assembly	
052-221	PS-32 printed circuit board, less parts	
-218C	OP-63 "	
-223A	OP-64 "	
-225A	OP-65 "	

052-227	OP-66 printed circuit board, less parts		
-220	OP-67	"	
-257	No. 257	"	(keyboard)
-325	No. 325	"	(rear panel)

Power Transformer:

022-098B-N	No. 98B-N	100V	
-098B-C	No. 98B-C	117V	
-098B-D	No. 98B-D	220V, 240V	

AC Line Cord:

053-104	VCTF	100V	
-027	SVT-3/18 (KP-30)	117V 3P	
-021	SVT-2/18	117V 2P	
-108	VM-0000	220VJ	
-026	KP-550	240V 3P	

Fuse:

008-030	SGA 5A		secondary
-080	SGA 4A		
-026	SGA 1A		
-046	MGP 5A	100V, 117V	primary
-070	CCE 2A	220V, 240V	primary
012-029	fuse holder	S-K 5054	
-018	fuse holder	XF-1153	220V, 240V
047-025	cord bushing	EA-5	100V, 220V, 240V
-022	" "	SR-5	117V
068-020	bushing no. 20		
042-036	terminal block	TT-501, D-04P	
048-048	heat sink no. 48		power supply board
-050A	" " no. 50A		rear panel
047-005	nylon clip	EP-4K	
111-020	base no. 20		
012-001	transister socket	TS-005	
065-121	" cover	ZZ-104P-00	
-034	cover no. 34 (for interface)		

016-008	button no. 8 gray	for push switch
-024	knob TK-175	for COMPO VR
-025	" TK-1122[illegible]	for interface
009-009	jack LJ-106-1-1	
064-144	holder no. 144	for bottom chassis
-145	" no. 145	for main panel
-208	" no. H-002	for interface

Switch:

001-219	SCK 41037	for [illegible] key
-220	SCK 41000	for control key
-221	SCK 41000	for number key
-170	SUL 12A-748A	push sw. no. 70
-222	SUE 12A-92	" " " 142
-180	SDG-5P	power switch
-153	DSR-E118R 20A	rotary switch
-065	DSL-2411	lever switch
-223	SA-2011	toggle switch

Potentiometer:

028-453	VH-10A 15S 5KΩ	shaft = 25mm
-443	" " 1MΩ	shaft = 20mm
029-101	PN B04C 3A(H) 101	100ΩB trimmer
-104	" " 102	1kΩB trimmer
-106	" " 103	10kΩ trimmer
-108	" " 503	50kΩB trimmer

Connector:

010-169	S-1660A-STA	60P	
-170	SW-1660A-STA	60P	
-171	P-1660BA-CA	60P	for bus cord
012-048	CS-260-1-1	6P	pin connector
010-172	PS-50SE-D4P1	50P	JAE
-173	PS-20SE-D4P1	20P	JAE
-176	No. 609-5003	50P	Amsley
-174	PS-50PA-D4t1	50P	JAE
175	PS-20PT-D4t1	20P	JAE

IC Sockets:

012-034	DICA-40C-T1	40P	JAE
-035	DICA-24C-T1	24P	JAE

Labels

076-333	No. 333	for key tops
-334	No. 334	for interface

IC:

020-111	μPD 8080A	NEC
-112	μPD 454D	NEC
-118	8253	INTEL
-113	μPD 410D	NEC
-114	μPB 8224	NEC
-115	μPB 2460	NEC
-116	μPD 757C	NEC
-117	μPA 53C	NEC
-120	74LS00	TI
-122	74LS02	TI
-124	74LS04	TI
-125	7406	TI
-126	74LS10	TI
-128	74LS27	TI
-129	7428	TI
-132	74LS86	TI
-133	74109	TI
-134	74LS122	TI
-135	74123	TI
-137	74LS126	TI
-138	74SL138	TI
-139	74LS139	TI
-140	74148	TI
-141	74LS175	TI
-142	74279	TI
-143	74LS367	TI
-144	74LS368	TI
-068	MC14046CP	Motorola
-054	LM311	NS

IC (continued)

020-147	LM565	NS
-062	μPC 1458C	NEC
-010	TA 7504M	NEC
-074	TC 5012	Toshiba
-090	TC 4051	Toshiba
-105	CA 3140T	RCA
-106	μA 7805 UC	FC
-107	7812 UC	FC
-108	7815 UC	FC
-109	7905 UC	FC
-110	7915 UC	FC
-148	DAC-80-CBI-V	BN

Transistor:

017-068	2SA562	
-012	2SA733	
-122	2SB541	
-013	2SC945	
-121	2SC1923	
-016	2SK30A GR	
-036	E412	

Diode:

018-014	1S2473	
-032	1S5151	
-033	1S5151R	
-019	Hi Fi Special GP-25	
-062	MI152	zenner
-063	MI152R	zenner
019-019	DL-747	LED
-009	LR-0601R R-ohm	LED

049-010 crystal HC-18/u 18MHz

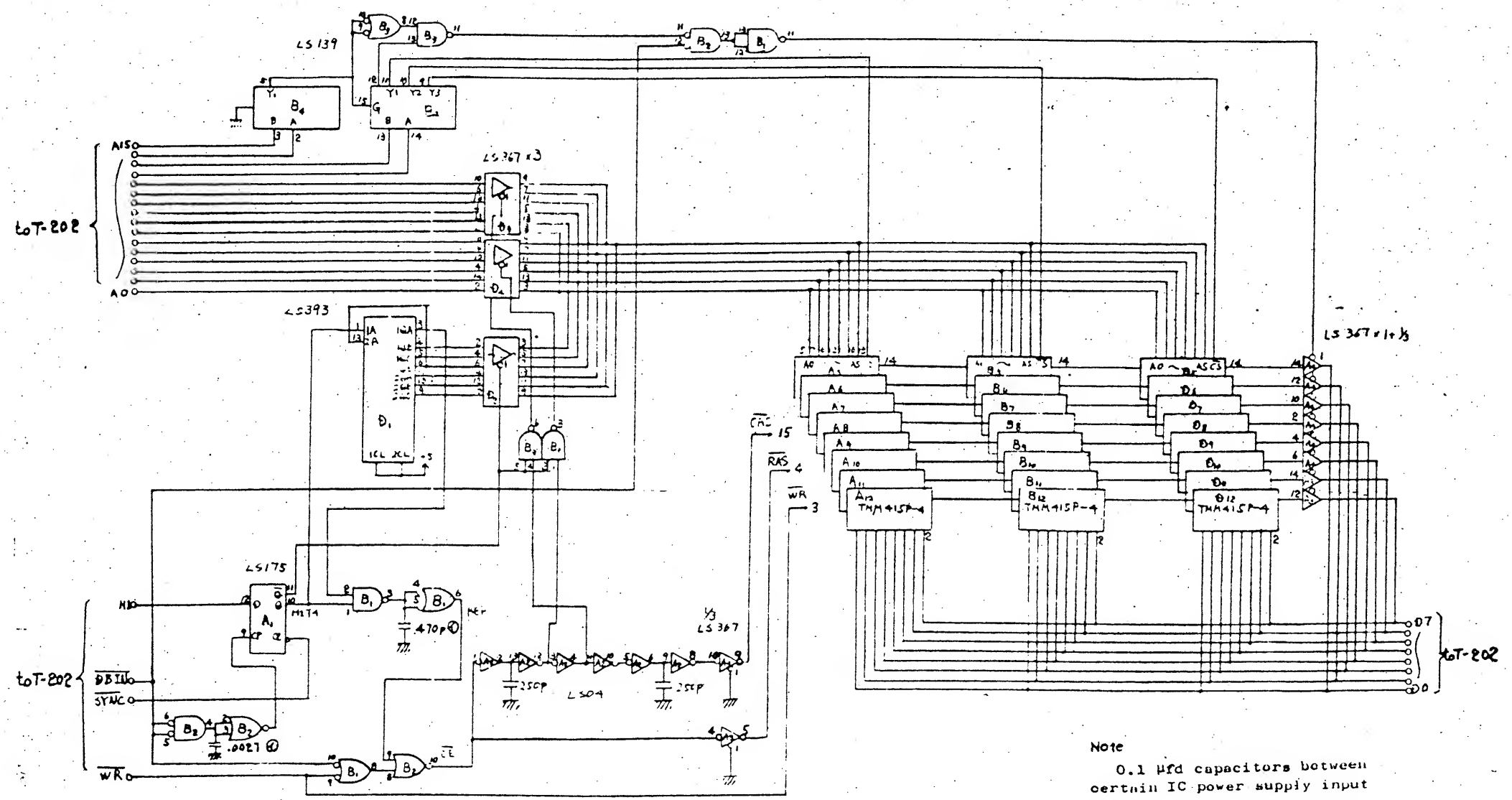
Capacitor:

032-149	ECEM 35R 472EU	35V	4700μ	electrolytic
-233	16LASN15000	16V	15,000μ	"

Capacitor (continued)

032-234	35LASN4700	35V	4700μ	electrolytic
-033	ECEA, 16V10	16V	10μ	"
-037	" , 16V100	16V	100μ	"
-045	" , 25V3R3	25V	3.3μ	"
-072	" , 50V2R2	50V	2.2μ	"
-122	ECEB, 35V1000	35V	1000μ	"

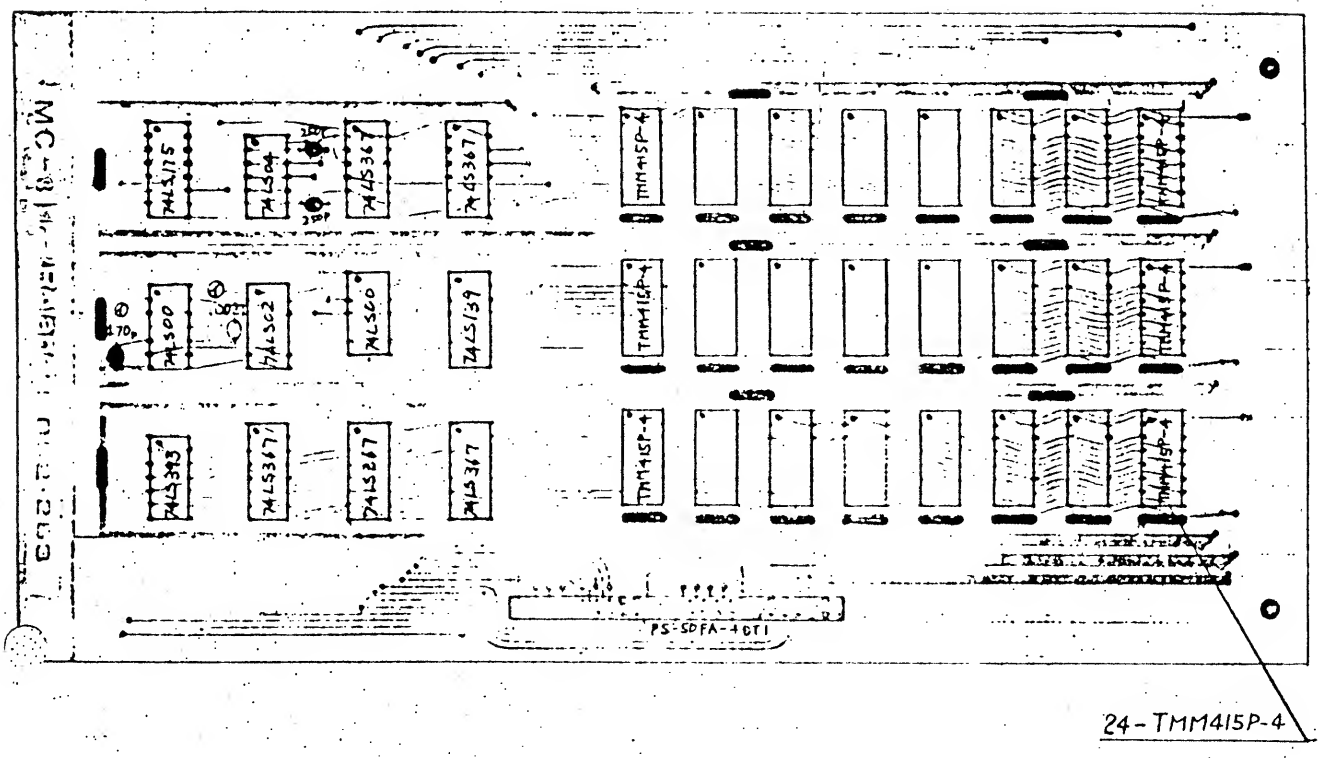
OM-8 Circuit Diagram

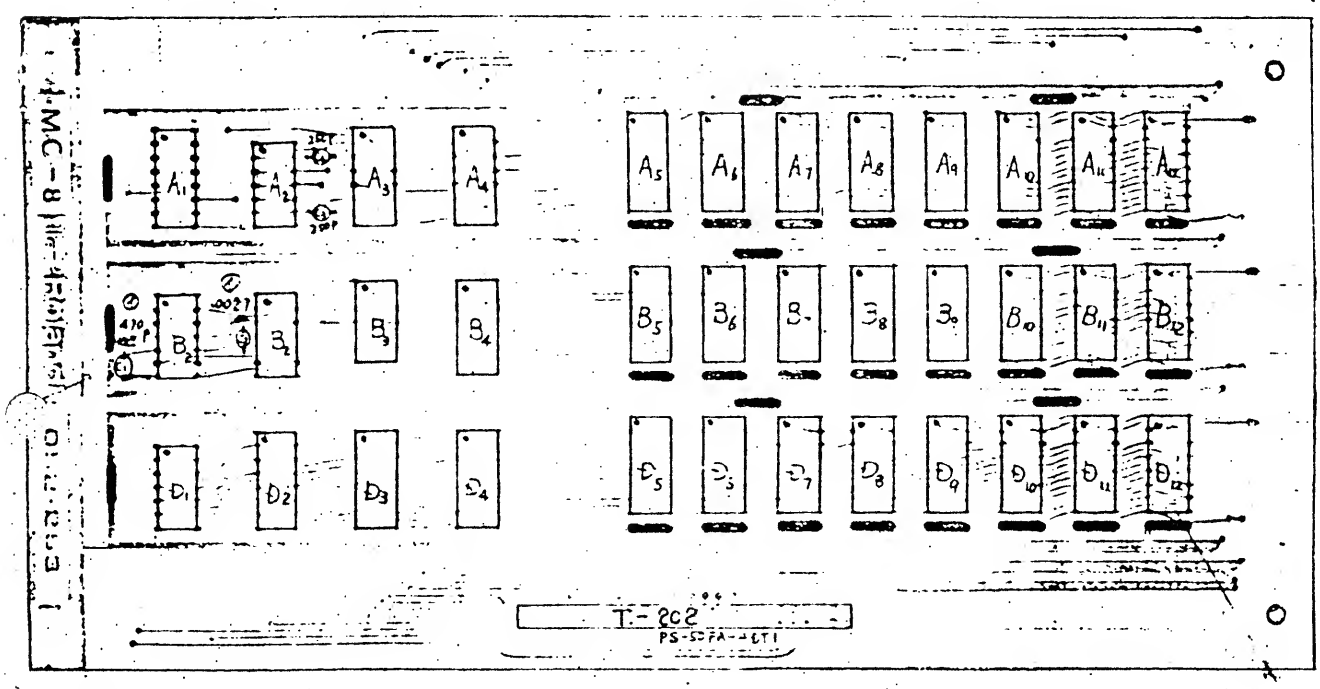


Note

0.1 μfd capacitors between certain IC power supply input pins and ground are not shown in this diagram.

OM-8 Circuit Board Assembly





- .1μ/25v Capacitor Ceramic
- Capacitor Ceramic (± 10%)
- Capacitor Mylar (± 10%)

MC-8 Option memory (OM-8) Parts List

Part Number	Part and Description
149-077	OP-77 option memory board assembly
052-263	OP-77 printed circuit board, less parts
020-149	TMM-415P-4 Toshiba
(020-151	µPD 414D NEC SER No.701008-)
020-120	SN74LS00 TI
020-122	SN74LS02 TI
020-124	SN74LS04 TI
020-139	SN74LS139 TI
020-141	SN74LS175 TI
020-143	SN74LS367 TI
020-146	SN74LS393 TI
010-174	Connector PS-50PT-D4T1 50P JAE

1978.6.16.

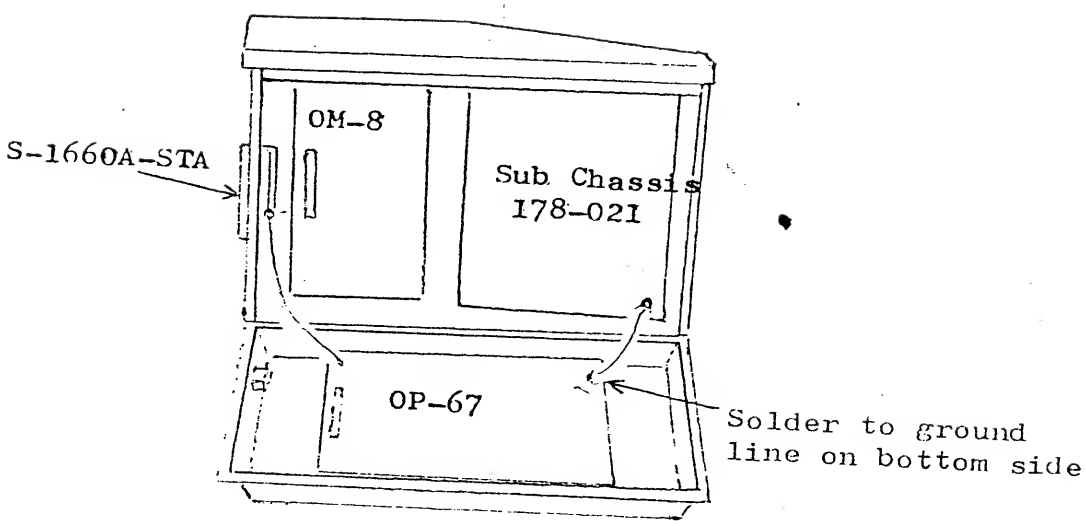


Fig. 4 Interface Wiring